The OIL WEEKLY

10¢ A COPY

Exclusively Devoted To The Production and Transportation of Oil and Gas

May 18, 1928 **Volume 49. No. 9**

Permanent

EVERY "IDECO" Structural Steel Derrick you see is a monument to somebody's foresight. Year in and year out they stand, silently proclaiming their superiority over tottering wooden derricks or steel lacking in Ideco's protective galvanizing. They defy wind and weather, rust and rot, fire and insects. Nothing takes the place of steel—"IDECO" Galvanized Steel—as a permanent yet portable installation.

"IDECO" derricks are designed and built of beams, channels and angles in such a manner as to give greater strength for a given weight than any other form of steel construction. Fabricated entirely in our own plant. By the International method of galvanizing after fabrication, every exposed part is given an extra heavy rust-preventing zinc coating.

Send for further details to any one of our branch offices listed below.

INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

THE INTERNATIONAL DERRICK & EQUIPMENT CO.

Dallas, Houston, Mexia, Wichita Falls, Odessa, Pyote, Amarillo, Borger, Corsicana, Pampa, Panhandle, Shreveport, Oil City, Smackover, Allen

The largest company devoted exclusively to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries.

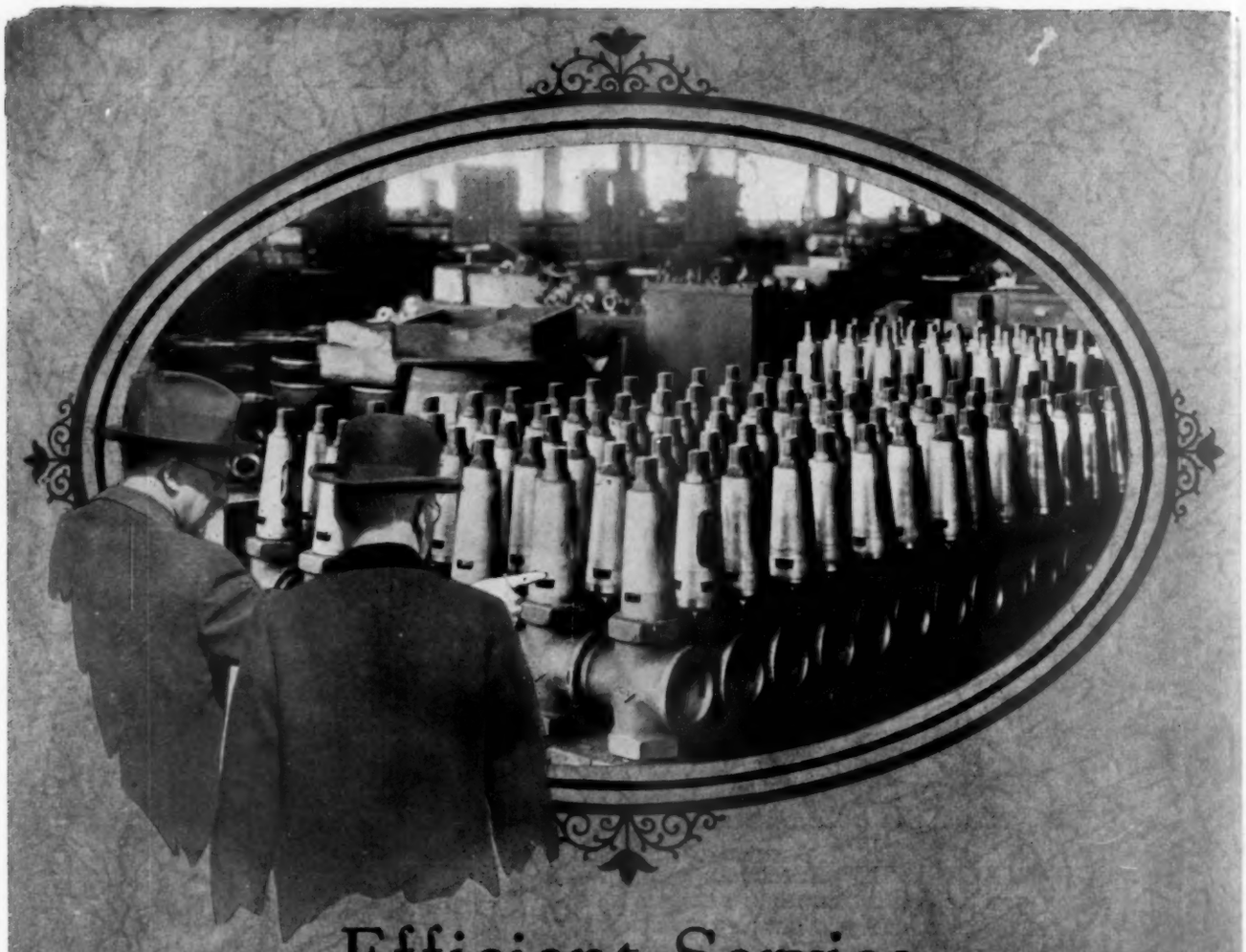
COLUMBUS, OHIO TORRANCE, CAL.

California Representative, National Supply Co. *of* California.

Sasakwa, Eldorado, Tulsa, Tonkawa, Drumright, Okemah, Seminole, Wewoka, Casper, Denver, Torrance, Los Angeles, Taft, Charleston, Detroit

Export Representation: 74 Trinity Place, New York City; Columbus, Ohio; Los Angeles and San Francisco, Cal.

515



Efficient Service
Is *Ground Into* JARECKI Fittings

IF there is any one thing that seventy-six years of manufacturing has taught us, it is that consistently long and efficient service is due not to chance or circumstance but to the life that the manufacturer *builds into* his product.

In the making of all-iron lock cocks we pay careful attention to every detail but particular attention to grinding. The plug and body which have been ground together are *kept* together. Equipment of most advanced design is operated by workmen who have graduated from the JARECKI "school" of training. An elaborate system of testing guarantees a perfect product.

The JARECKI stock of oil well supplies at Erie is one of the most comprehensive in existence—and your JARECKI store is a miniature of that stock! The JARECKI habit is a good one to acquire.

J

Jarecki

MANUFACTURING COMPANY

Home Office and Factory—Erie, Pa., U. S. A.

General Office, St. Louis, Mo.

Branch stores at all important places in the Oil Country.

District Offices { Pittsburgh, Pa.; El Dorado, Kan.; Tulsa, Okla.; Newark, Ohio; Eastland and Dallas, Texas; Lawrenceville, Ill.

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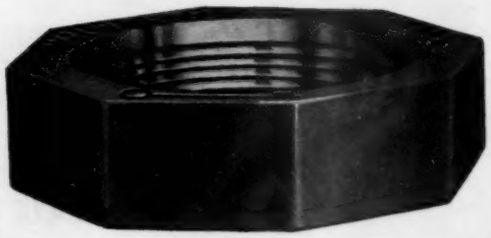
GASO PUMPS
for every oil industry need

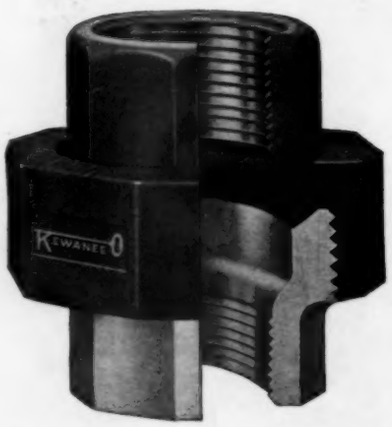
Say you saw it in The OIL WEEKLY

WALWORTH KEWANEE UNION



SOLID THREE-PIECE CONSTRUCTION

NO INSERTED PARTS



Bronze-to-steel ball-joint and three-piece construction insure a leak-proof joint, even when the line sags. Every single Kewanee Union is air tested under water.

Five distinct points of superiority distinguish the Walworth Kewanee Union:

1. Bronze-to-iron thread connection—no corrosion;
2. Bronze-to-steel ball-joint seat—no gasket;
3. Solid three-piece construction—no inserted parts;
4. Tested by compressed air under water—no defective parts;
5. Easily disconnected with a wrench—no force required.

A tight ring means a tight joint, because gasket or packing are not necessary, and forged steel against softer forged bronze thread-end insures a leakless joint. And the nuisance and labor of making up a joint with a gasket is eliminated. Moreover, Kewanee Unions can be disconnected easily when necessary and put back in the line again—as good as new. They won't leak and can't corrode.

Sold By

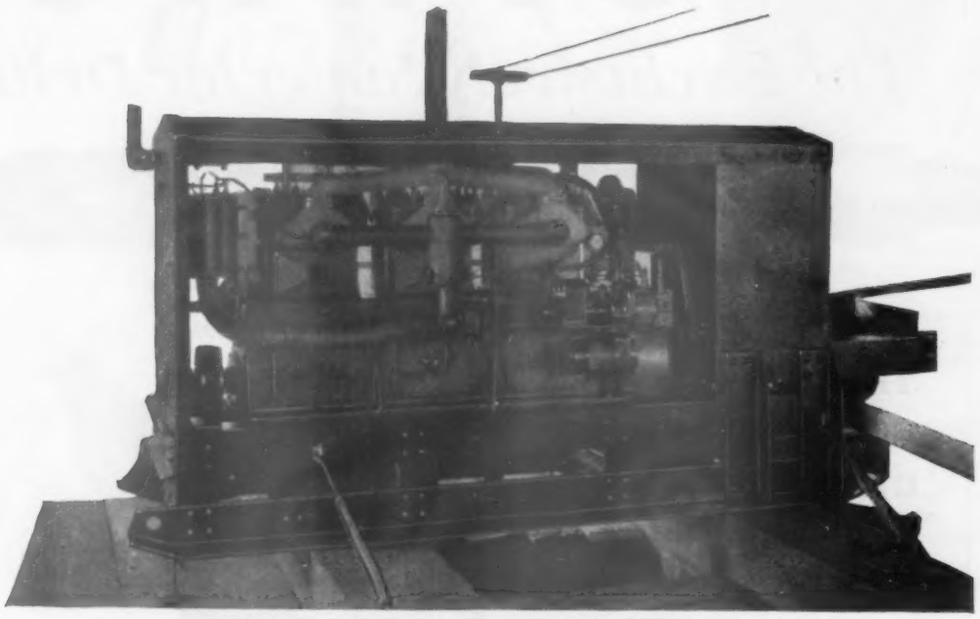
Republic Supply Company

GENERAL OFFICES - HOUSTON, TEXAS

OIL AND GAS WELL SUPPLIES

ROTARY AND CABLE TOOLS

Another Climax Victory



Climax High-Speed "Paymaster" 6-cylinder drilling engine.

Over Steam Power

J. W.—"Jack"—Robinson of Wichita, Kansas, has been drilling with a Climax High-Speed Paymaster engine and clutch on the Bailey Farm east of Langdon, Kansas. "Jack" writes that this drilling outfit handled heavy strings of 8¼ inch casing to a depth of 3400 feet. The clutch held the tools and casing in neutral any place without using the brake. It handled the tools equally well on a fishing job of 3100 feet. The Climax "Paymaster" swung these two strings of tools better than anything he had ever used. He carried 30 bailers of water in the 10-inch hole at 3000 feet. "Jack" ends his letter by saying "I will honestly state that I got more satisfaction out of this equipment than I ever got out of steam."

Climax Predominates

Of the wells drilling in Howard County, Texas, 45% are using Climax High-Speed "Paymaster" engines . . . And in the Chalk Pool over 50% of the wells are drilling with Climax High-Speed "Paymaster" drilling units.

CLIMAX

Trade Mark Reg. U. S. Pat. Off.

CLIMAX ENGINEERING COMPANY
75 West 18th Ave. Clinton, Iowa

DISTRIBUTED BY
THE NATIONAL SUPPLY COMPANIES

S-P-A-N-G

The Exclusively Superior Drilling Jar

Patented Oct. 6, 1925—Other Patents Pending

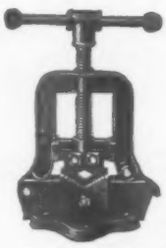
The Spang Weldless Drilling Jar is *exclusively Spang* **— The ONLY Drilling Jar that's made of a single billet of tough alloy steel and forged into the Strongest, Longest-Lasting Drilling Jar obtainable at any price.**

SPANG AND COMPANY
BUTLER, PENNSYLVANIA

Sold by all leading Supply Houses

Patented Oct. 6, 1925—Other Patents Pending

A Letter from Harry G. Nye



Nye Self-Locking Vise

No.	Pipe	Vise, Complete Net
00	⅛ to 2 "	$2.82
10	⅛ to 2½"	3.34
20	¼ to 3½"	5.00
30	½ to 4½"	7.33

Nye Drop Forged Pipe Cutter

No. 1-A	⅛ to 1¼"	$2.25 net
No. 2-A	¼ to 2"	3.00 net
No. 3-A	1 to 3"	5.00 net

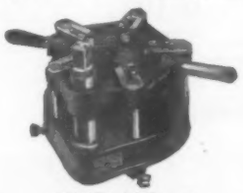
Nye Saunders Pipe Cutter

No. 1	$1.80 net
No. 2	2.70 net
No. 3	6.60 net
No. 4	10.80 net
No. 5	16.80 net

NYE (Toledo Type) Chasers fits Nos. 1A and 2 NYE (Toledo Type) Stocks

Each set is guaranteed in every particular. Will cut much easier than other similar dies.

No. 1, 1" to 1½"	$ .75 per-set net
No. 1, 2"	$1.25 per set net
No. 2, 2½" to 4"	$3.60 per set net



NYE NO. 2
(Toledo Type)
Geared Threading Device Improved

Capacity 2½ in. to 4 in. inclusive. This tool has the same rugged construction as the No. 1 and No. 1A Nye Receding stocks. A ratchet handle and a spider hub threaded for 1-inch pipe is furnished as standard equipment.

Net price complete $50.00
West of Rocky Mountains .. 55.00

FREE TRIAL—ABSOLUTELY GUARANTEED

To the Oil Men of the U. S. A.

Friends:

A couple of years ago I suggested that a plumber would make a good presidential candidate. From the enthusiasm with which my suggestion has been carried out, you would think I had made it to my wife. Nevertheless, I know that a lot of plumbers would make better presidential candidates than a lot of presidential candidates would make plumbers.

Suppose you have a leak in the basement. I mean supposing you are an ordinary citizen and not a plumber yourself. You send for a plumber. He goes down in the basement, feels around in the dirt, rubs a little of it back of his ear and under his eye, and finds the leak and fixes it. But, if you sent for a presidential candidate, what would happen?

In the first place, he wouldn't come right out and admit that there was a leak. He certainly wouldn't if the plumbing had been put in by his party. He might be standing in four inches of water, but he would probably say that what was needed was a Congressional investigation. The thing to do would be to subpoena a lot of witnesses and hire a lot of lawyers.

He wouldn't come right out and say there was a leak, or wasn't. You see, there might be a lot of voters who were in favor of a leak, and a lot who weren't. A candidate can't be too careful. If you asked him if there was a leak, he would probably say, "Well, yes, and no. There undoubtedly IS a leak, but, on the other hand, there may not be any leak whatever."

We plumbers take most of the credit for the hot and cold water faucets, but it's all wrong. They weren't invented by any plumber. They were invented by some politician. If it's hot you want, hot you shall have—if you're a voter. If you want cold, then he is for cold water, and lots of it. Hot or cold, wet or dry, survive or perish, he turns on a political faucet and agrees with you.

People talk about politicians pulling wires, but what they really do is to turn on faucets. They can make wine or water flow from the same bunghole, whichever you want. Well, since to be a good politician you have to be a good plumber, why not elect a good plumber in the first place? That is why I am for a Plumber for President. He would give the people what they want, all out of one faucet.

He would have to do some smooth work, but that would be easy. He could use Nye tools, which work smoother than any other pipe-cutting tools on earth. And faster, too. And easier. And last longer. They work smoother than a politician, and last longer than a government job.

Come on, boys and girls, let's nominate some p.. mber!

HARRY G. NYE.

Otherwise Known As

THE NYE TOOL & MACHINE WORKS

4120-30 Fullerton Avenue

Chicago, Ill.

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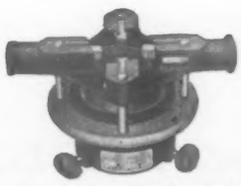


The rugged construction and few working parts account for the simplicity and durability of these Nye Receding models. They do the work easily and efficiently.

No. 1 Nye Receding Pipe Threader, complete ....$9.60 net
West of Rocky Mountains $10.80

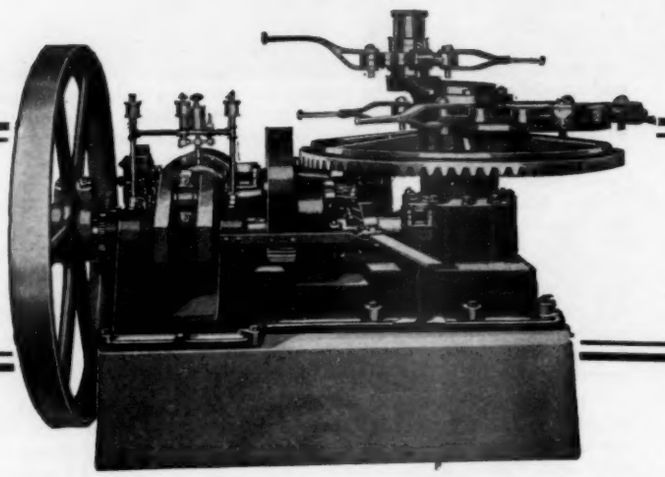
Nye thin blade cutter wheel, made to fit all standard makes of pipe cutters, and guaranteed against breakage in use. Made both in smooth and knurled edge.

The No. 1A is the same as the No. 1, except that it is equipped with a ratchet for work where space is restricted.

No. 1A Nye Receding Pipe Threader, complete ...$12.00 net
West of Rocky Mountains $13.50

Combination Geared Power

MADE IN THREE SIZES



12 H. P.
15 H. P.
and
20 H. P.

FOR dependability and a longer service, the Pattin Combination Geared Power has no equal. It stands the gaff, delivers the power and renders a continuous service at a minimum cost.

Made in three sizes, 12, 15 and 20 H. P., this unit is fitted with an eccentric and disc giving practically a double eccentric power. It is direct connected to our 4-cycle gas engine, and is the most efficient pumping outfit on the market.

The complete unit will cost less than any belted power and engine of the same capacity, can be housed in a building 10 ft. x 12 ft., saves the price of a 60 ft. belt, and one foundation.

We wish to call your attention to the rigid construction of these powers. The spur gears are cut from the solid and run very quiet. The clutch hub is steel, and the pinion gear cut from solid steel. The engine crank shaft has an O. B. bearing cast on the bed plate and is self contained. The lever clutch is mounted on the engine shaft, is fitted with wood shoes, and will carry the heaviest loads without slipping. One large oil reservoir on disc pin oils the whole power.

The engine is regularly fitted with Wico igniter, but we can furnish tube ignition if preferred. Gasoline attachment is extra (can be attached in a few minutes in the field), and, if gas is weak, turn on what gas you have and add enough gasoline to keep running.

PATTIN PRODUCTS

Gas Engines
Pumping Powers
Water Pumps
Air and Gas Compressors
Vacuum Pumps
Oil Country Boilers
Torpedo Reels and Clamps
Steel Storage Tanks
High Pressure Tanks
Howe Casing Heads
Shackle Irons

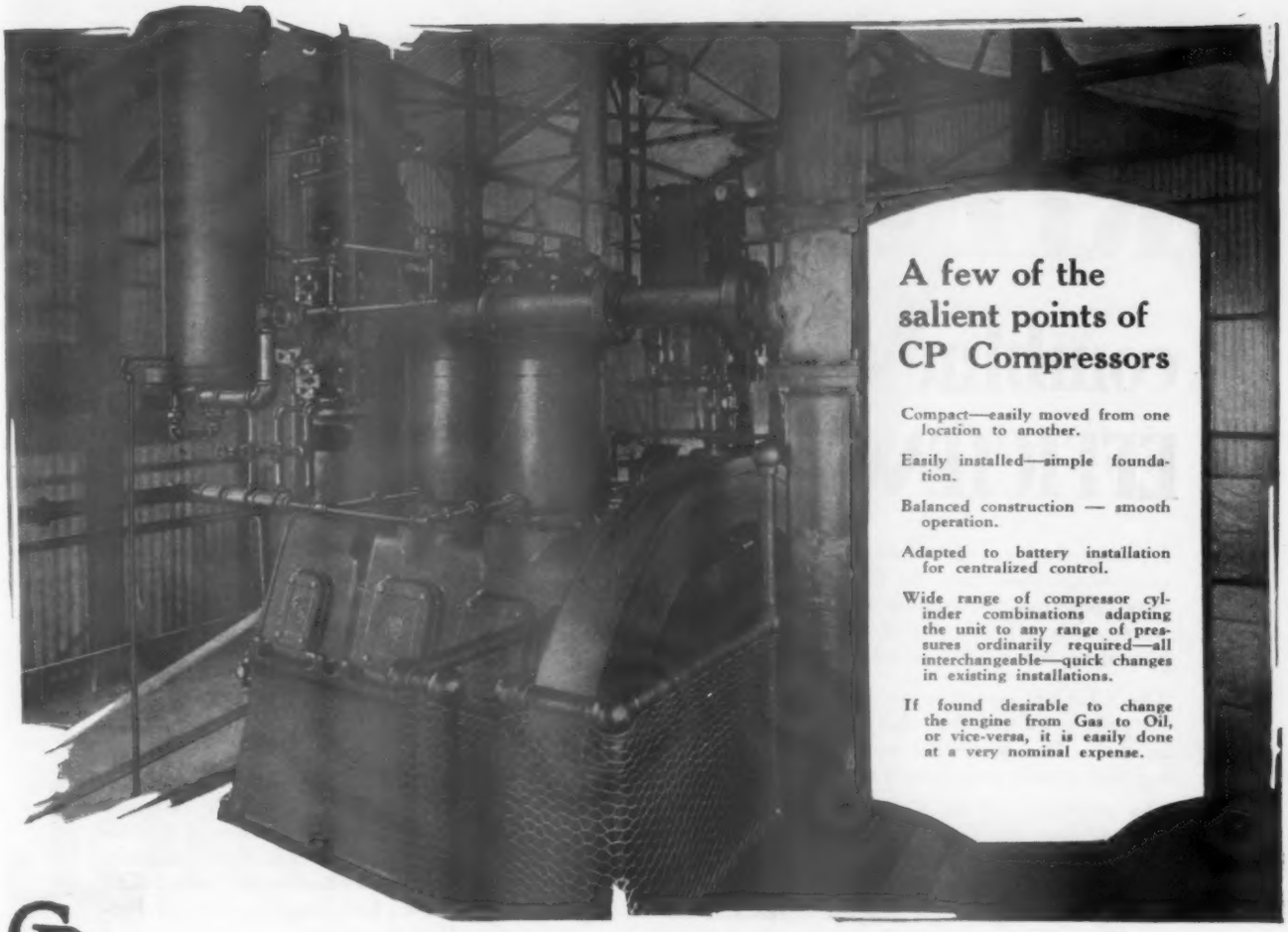
THE PATTIN BROS CO

Write for prices, or inquire of any of our representatives

The Pattin Brothers Company

MARIETTA, OHIO

Tulsa, Okla.	Nowata, Okla.	Wichita Falls, Texas	Putnam, Texas	Bradford, Pa.
A. S. Dunnington	J. Barnes	J. W. Noland	Putnam Supply Co.	The Blaisdell Machinery Co.



A few of the salient points of CP Compressors

Compact—easily moved from one location to another.

Easily installed—simple foundation.

Balanced construction — smooth operation.

Adapted to battery installation for centralized control.

Wide range of compressor cylinder combinations adapting the unit to any range of pressures ordinarily required—all interchangeable—quick changes in existing installations.

If found desirable to change the engine from Gas to Oil, or vice-versa, it is easily done at a very nominal expense.

CP Vertical Gas Engine Driven Air Compressor Class V-CTG

THE above illustration shows two CP Four-Cycle Vertical Gas Engine Driven Two-Stage Air Compressors, Class V-CTG, employed in the flowing of oil wells in a Mid-Continent field. This unit is ideally adapted to oil field work. It is compact, rugged and easily installed. The compressor is CP standard design, equipped with Simplate Flat Disc Valves.

There is a large variety of interchangeable cylinder sizes carried in stock at a convenient point near you. This affords protection to CP equipment users, under the constantly changing operating pressure demands.

CP Gas Engine Driven Compressors can be furnished in sizes from 90 to 270 horse-power. Are also available in the solid injection Diesel Engine driven types.

Address the nearest branch or dealer for fully detailed specifications.

Chicago Pneumatic Tool Company

6 East 44th Street, NEW YORK, N. Y.

*Sales and *Service Branches all over the World*

WHEALTON & TOWNSEND, INC., Authorized Distributors—Higgins Bldg., Los Angeles; 120 East Brady St., Tulsa; 1415 Fannin St., Houston; 1502 Magnolia Bldg., Dallas

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Canadian Pneumatic Tool Company, Ltd., Montreal, manufacturers of Chicago Pneumatic products in Canada
Consolidated Pneumatic Tool Company, Ltd., London, manufacturers of Chicago Pneumatic products in England

M-5

CHICAGO PNEUMATIC AIR COMPRESSORS · BOYER PNEUMATIC HAMMERS · ROCK AND COAL DRILLS · CONDENSERS
LITTLE GIANT PNEUMATIC AND ELECTRIC TOOLS · GIANT OIL AND GAS ENGINES · VACUUM PUMPS · OIL BURNERS
PAINT SPRAYERS · TOOL BALANCERS PNEUMATIC HOISTS · SAND BLASTERS

CHICAGO PNEUMATIC

Depend upon that Name

the CLARK DRILLING ENGINE

combines GREAT ECONOMY with EFFICIENCY and CONVENIENCE

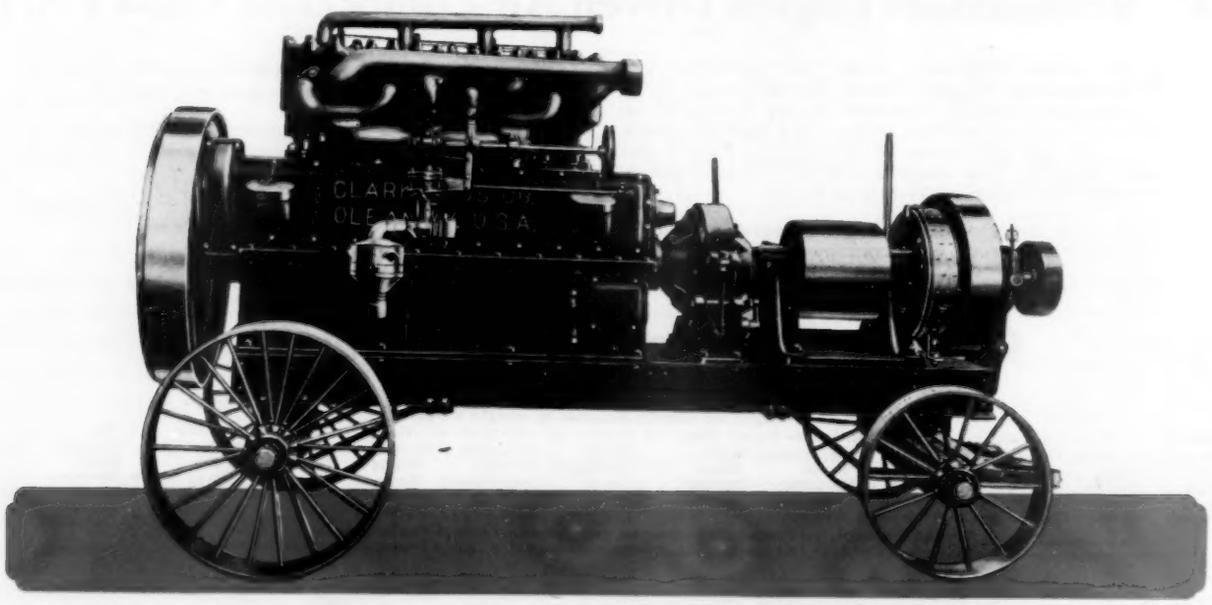
Drilling cost records of modern operators and contractors show that the CLARK Drilling Engine combines remarkable savings in fuel and water with efficiency and convenience unsurpassed by any other type of drilling engine.

The CLARK operates on 7000 feet of gas or 75 gallons of gasoline daily—a distinct saving in fuel. It requires no water except for cooling and entails no expense for cleaning scale.

The efficiency of the CLARK results from its 4-cylinder design, which gives the needed slow drilling motion, delivers 35 to 120 H. P. at 85 to 500 R. P. M., and furnishes ample power for drilling the largest and deepest holes and for handling the heaviest strings of pipe. Since the CLARK will maintain maximum power at maximum speed indefinitely, there is no waiting for power and valuable drilling time is saved.

Features in the convenience of the CLARK Drilling Engine are full control from the derrick floor, easy portability on its own truck, quick and easy installation on mud sills, and the absence of a water and scale problem.

Full information on request. Clark Bros. Company, Olean, N. Y. Branch and Warehouse: 125 W. First St., Tulsa. Warehouses at McCamey and Sweetwater, Texas, and Artesia, N. M. California: Smith, Booth, Usher Co., 228 S. Central Ave., Los Angeles, and 50 Fremont St., San Francisco.



CLARK

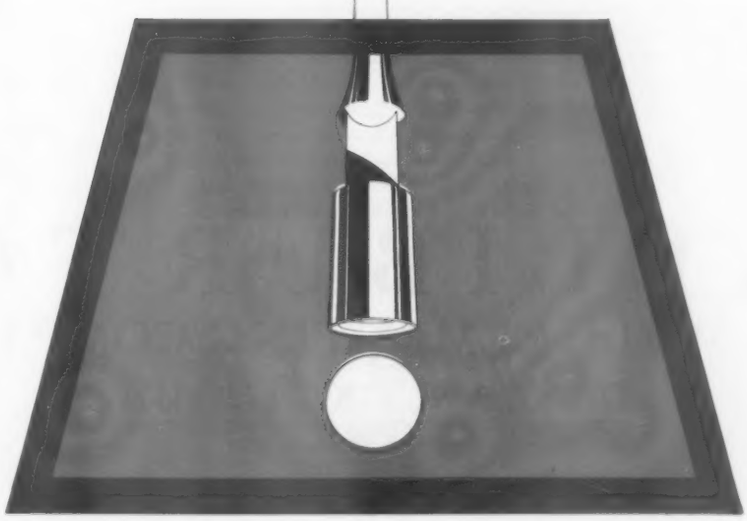
Say you saw it in The OIL WEEKLY

Only Jones can offer the highest fatigue resistance known in sucker-rod steel in

JONES SUCKER RODS

10,000 to 40,000 lbs. per square inch stronger—increased fatigue resistance better by from 50% to 400% over any other rod tested in our laboratory—that's the story of Jones High Manganese Steel Rods—the strongest, longest lasting rods made.

THE S. M. JONES COMPANY
TOLEDO **OHIO**
TULSA OFFICE: 422-423 McBIRNEY BUILDING

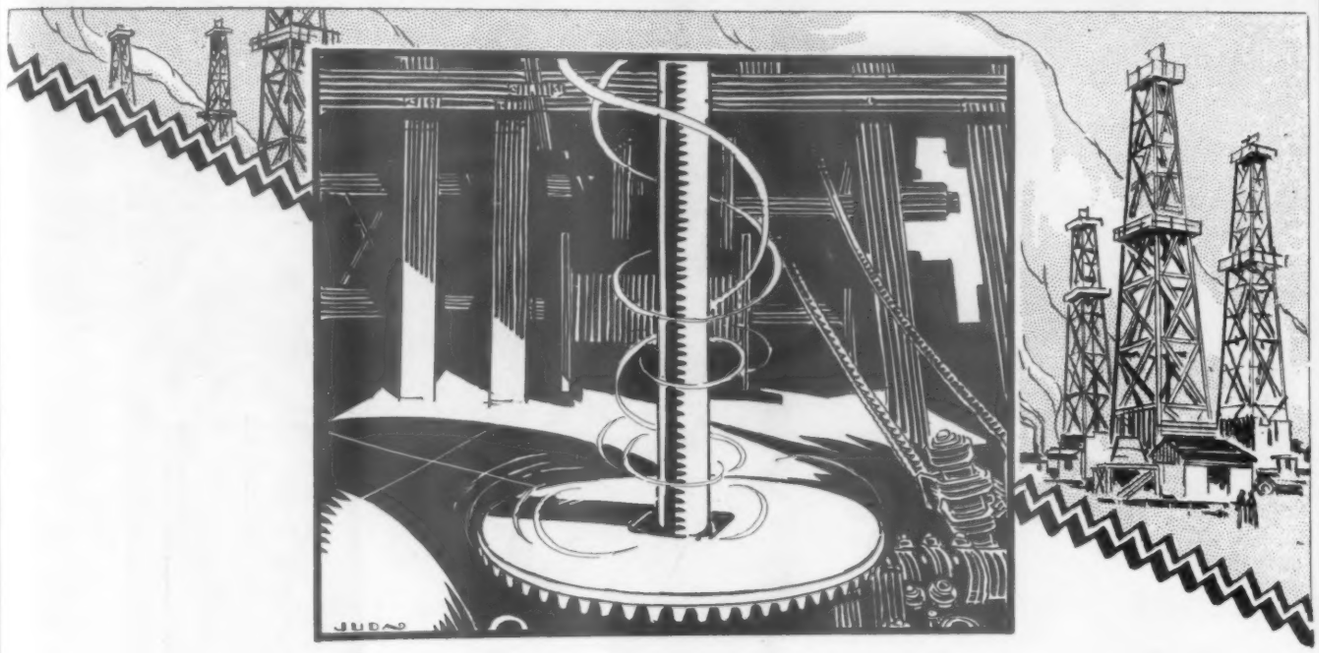


Say you saw it in The OIL WEEKLY

Waste, always regrettable, becomes doubly so when the commodity is irreplaceable. Underground waste is reduced to the minimum in Halliburton-cemented fields.

HALLIBURTON
OIL WELL CEMENTING COMPANY
DUNCAN, OKLAHOMA

Say you saw it in The OIL WEEKLY

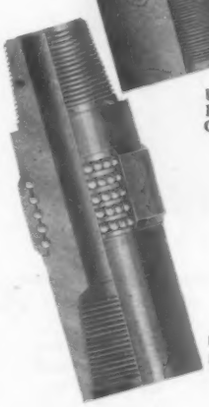


THE GRINDING WEAR OF HEAVY DRILLING— DEFEAT IT!

USE

U-S *ANTI-FRICTION* TOOL JOINTS, COLLARS *AND* SUBS

U-S Anti-Friction Collar



U-S Anti-Friction Sub

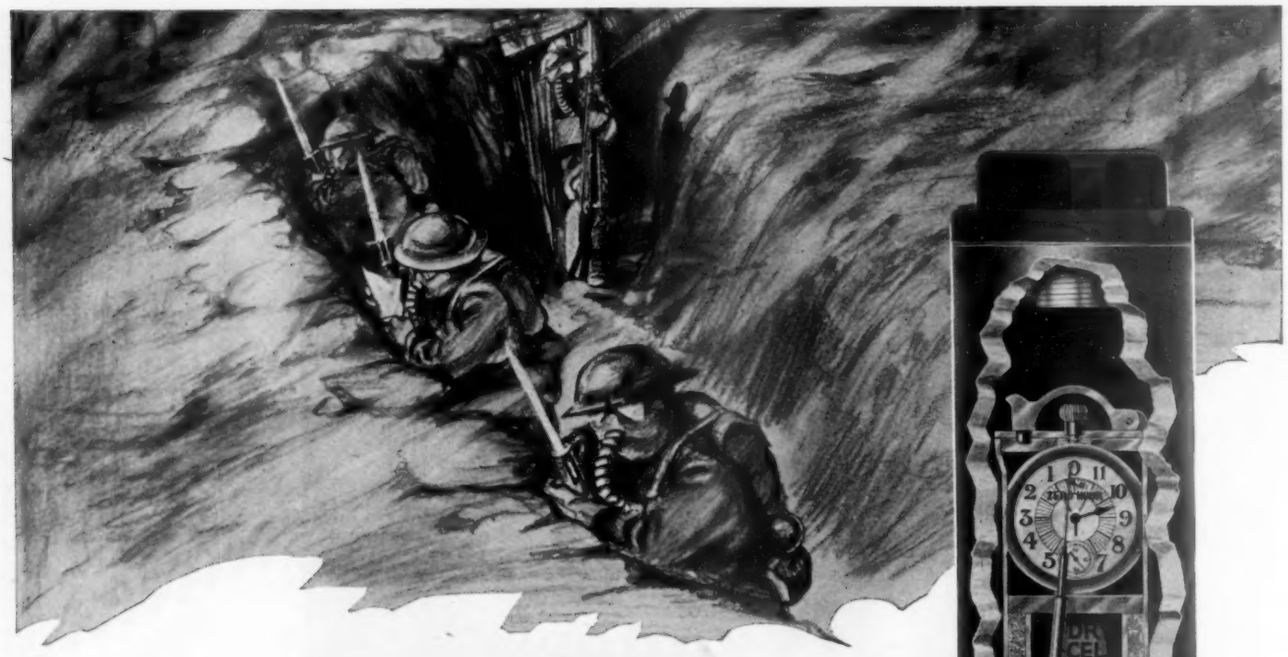
U-S Anti-Friction Tool Joint

They last four and five times longer than anything else made for a similar purpose. It is not uncommon to hear of them being in service 250 days and longer without reconditioning. When it is necessary to recondition them, the cost is trifling in comparison to replacements required when you use less durable equipment, the life of which seldom exceeds 30 to 40 days. For low Cost Maintenance You Can't Beat U-S Anti-Friction Tool Joints, Collar and Subs.

U-S TOOL CO.

Manufacturers of Oil Well Tools

Long Beach California



The element of COMPLETE SAFETY

The new gas masks cover the entire body. With them, safety is an *absolute* measure, not a matter of face and lungs only. The entire body is protected, from burns as well as asphyxiation. A *complete unit of safety* is the watchword of their creation.

A complete unit of safety is a term readily applicable to the Zero Hour Electric Bomb. Every detail of design and construction is dedicated to the protection of life and property. Not an afterthought, but an *absolute* measure, safety, with the Zero Hour Bomb, is an inherent quality, something to be considered part of the name.

Timed by a watch buried in cast iron, there is no way within the experience of oil operators whereby the charge within the bomb can be set off ahead of the time for which the watch is set. While the hour hand is approaching the gold firing pin at the "zero hour," the bomb is danger-proof, *having a safety interval of from one to twenty-two hours,* depending on which of the two types is desired, STANDARD TYPE, 1 to 11 hours,—SPECIAL TWENTY-TWO HOUR TYPE, 12 to 22 hours. Danger-proof means impervious to jarring, fluid pressure, heat or magnetic influence.

With a bomb like Zero Hour, comprehensive in design and working features, major operators have discovered that the protection element in shooting costly wells can be taken care of effectively, with the result that the ZERO HOUR ELECTRIC BOMB is specified quite generally among large scale producers.

ZERO HOUR TORPEDO COMPANY

408 Cosden Building, Tulsa, Oklahoma

Day Phones: 2-9612. Night Phones: 3-1775, 3-7650, 2-6097

BORGER, TEXAS
Howard Culp
Phone 254, P. O. Box 411

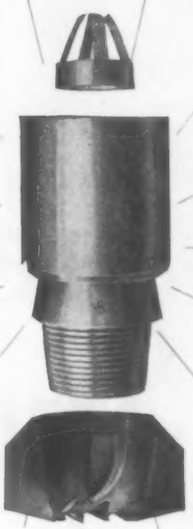
SEMINOLE, OKLAHOMA
George Pascoe
Phone 410, 518 Second Street

ZERO HOUR
Electric Bomb

Both the STANDARD and SPECIAL types are furnished with either 3¼" O. D. cast iron shell, or with the 2½" O. D. seamless tubing steel shell with cast iron cap. The Zero Hour Electric Bomb can be secured through all principal torpedo companies.

Say you saw it in The OIL WEEKLY

GUARANTEED



The Smith Type "C" Bit

Now you can have a *guaranteed* core bit—guaranteed to take *perfect* cores in any formation penetrated by a fishtail or disc—the new H. C. Smith Type "C".

Drop forged—not cast—high-carbon steel throughout; cutter heads specially adapted for use with hard sets (Borium, Dymonettes, Titan, etc.) and hard facing alloys (Stellite, Stoodite, etc.). After being worn out the cutter head can be thrown away and economically replaced by a new one. Changing cutterheads requires only a few seconds.

Circulation is close to the teeth, giving a clean, uncontaminated core. Core catcher is placed in the bit sub instead of in the body.

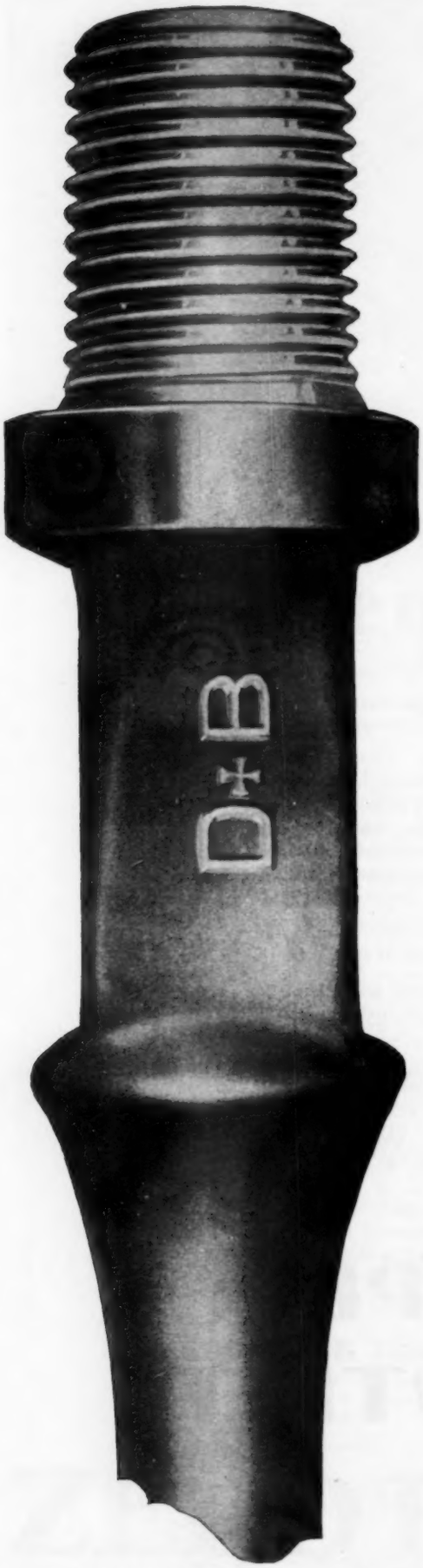
Simple in design, construction and operation—and guaranteed to take perfect cores! Send for the special folder which describes the Type "C".

H. C. SMITH MANUFACTURING CO., INC.
WHITTIER, CALIFORNIA
Branch Offices and Warehouses:
TAFT, CALIF. BAKERSFIELD, CALIF. VENTURA, CALIF.
Oil Well Supply Co., Exclusive Distributors, All Over the World

SMITH TYPE C CORING OUTFIT

HSC

UNUSUAL DESIGN UNUSUAL PERFORMANCE



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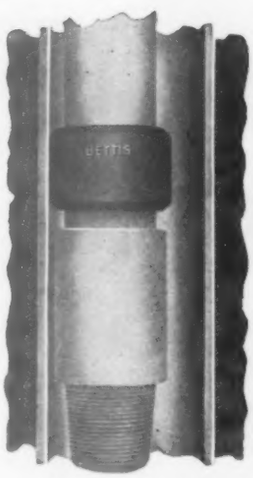

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(over)

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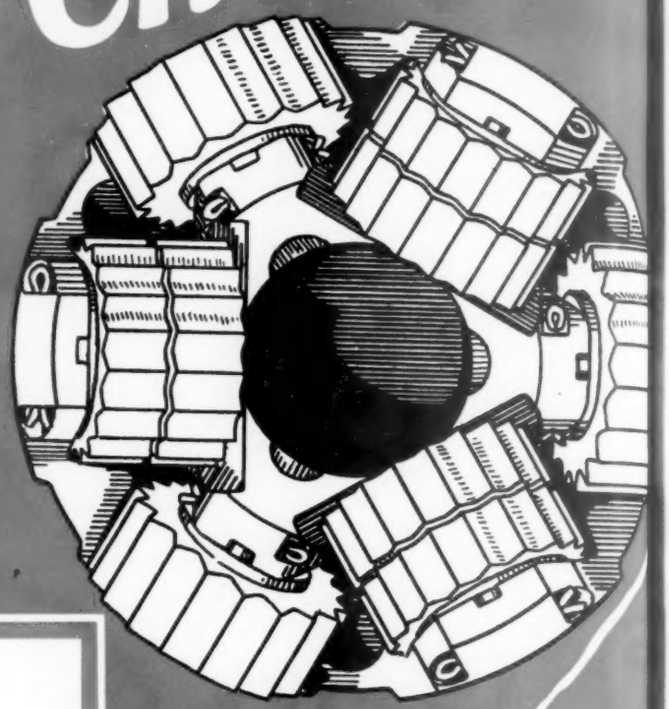

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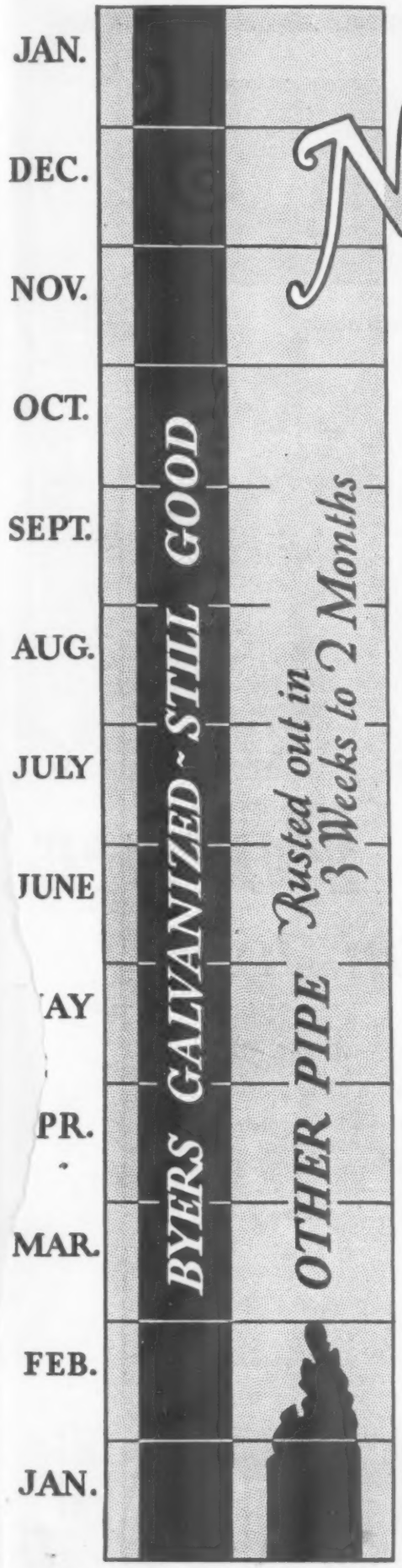

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Steel pipe submitted to same test as shown above. Note how galvanizing comes off in big flakes.

BYERS GALVANIZED Tubing

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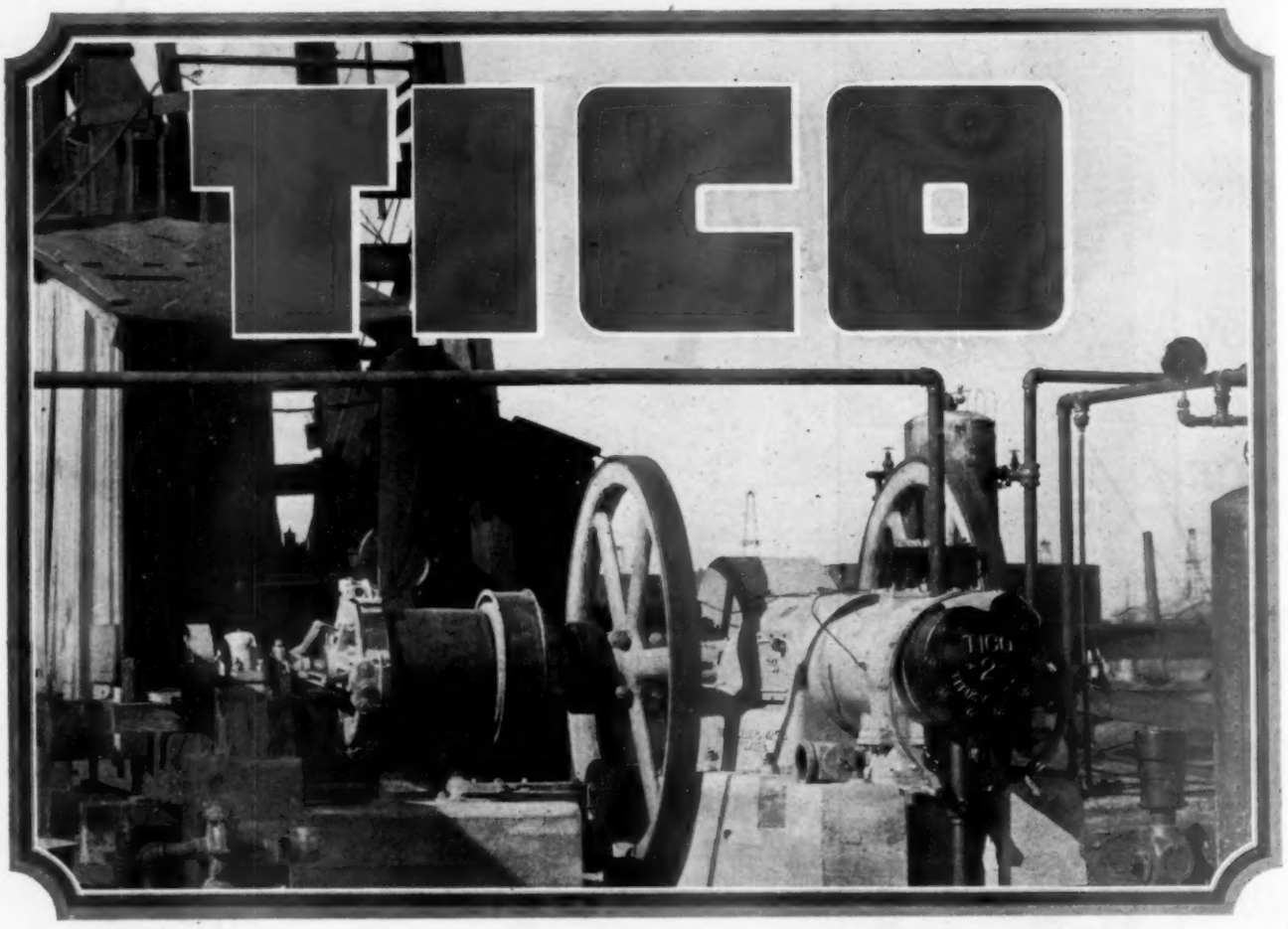

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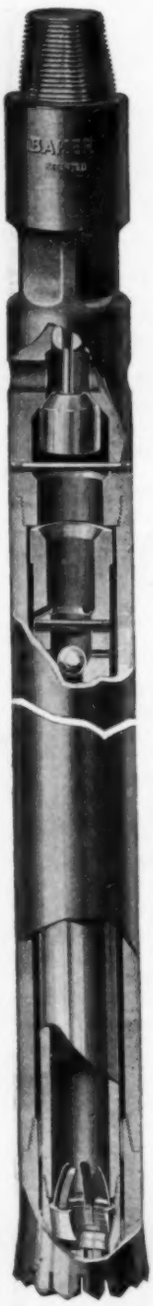

The Baker Standard Core Barrel

The Baker Core Barrel Tongs

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MAY 21 1928

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The OIL WEEKLY

Edited Weekly at Houston, Texas

SPENCER W. ROBINSON, Editor

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Sharp Production Drop Adds Strength to Market

Seasonal demand for gasoline in Mid-Continent causing refiners to increase runs of crude while curtailment brings price increase rumors

By KENT RIDLEY

SUCCESS of the proration order in the Hendrick pool in West Texas resulted in the most pronounced drop in production recorded in many months, or perhaps for all time. This decline, coming at the time of better demand for gasoline, is having a decided stimulating effect upon market strength, an influence which is being felt in all sections.

The total decline in daily average as shown by A. P. I. estimates, was 111,250 barrels daily, or more than three-quarters of a million barrels gross for the week. The decline was general in Texas, outside of the Gulf Coast, although the drop from 272,800 barrels to 159,700 barrels in Winkler County, was of course the biggest influence. Oklahoma and Kansas both show small losses, as does North Louisiana. Increases in other sections were slight.

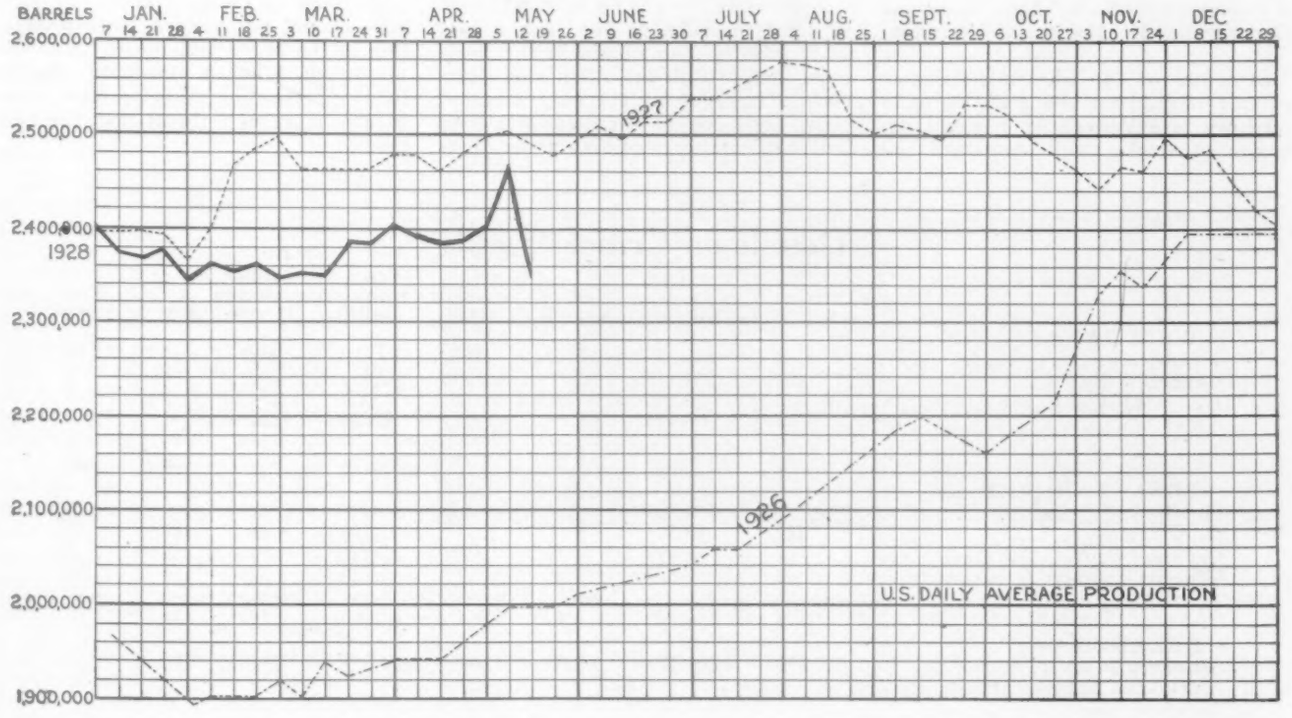
Gasoline Orders

Further progress towards an early upward revision of posted prices of the light oil produced in the Mid-Continent district was made during the past week when Gulf Coast refiners distributed orders for several million gallons of U. S. motor gasoline with North Texas and Louisiana-Arkansas district plants for prompt delivery to Coastal points. This buying is for Coastwise and export points, and indicates the strength of present gasoline market as to prices and demand, since the purchasers remained in the market in the face of rising prices to make sure that their requirements are fully covered.

North Texas plant owners shared in this new quantity buying, and current prices on U. S. motor gasoline in the district were ranging from 7⅜ to 7½ cents per gallon f.o.b. cars, with stocks comparatively low. Gulf Refining Company is listed as one of the heavy buyers of this grade of gasoline, and is credited with having purchased more than 1000 cars from North Texas plants within the past three months. Gulf has remained in the market despite the fact that refiners' quotations have been advanced a total of about one and one-half cents per gallon since the first series of orders were distributed among Wichita Falls plants. Galena-Signal is reported to have also joined in the gasoline buying during the past week.

Increased operations of refineries in North Texas has developed a tight crude market situation throughout the district, and independent plants are absorbing all the current crude runs made by Pure Oil Pipe Line Company of Texas. This concern is a subsidiary of Prairie Pipe Line Company, and gathers all North Texas oil produced and purchased by Prairie Oil & Gas Company. It is serving most of the independent plants with crude at the posted price, plus average pipe line tariffs and a ten-cent marketing charge per barrel. If crude deliveries to plants are increased by Pure (Prairie), withdrawal from storage oil will be necessary to meet the demand, and it is not likely that Prairie will sell oil that has been incurring a storage

UNITED STATES CRUDE PRODUCTION TREND



expense for many months at the present low price level. Failure to take care of the refiners will result in the latter canvassing producers for spot oil at attractive premiums, thus causing a loss of connections being sustained by major pipe lines in the district. Either move now argues for higher crude prices, and the plant owners now have sufficient margin of profit on refined products to adequately cover one or more crude price advances.

The Texas Panhandle district, where sulphur contaminated crudes predominate, is in a strong position for a crude price increase, and premiums are being paid for spot oil by local plants in this district, while crude stocks were drawn on at an average rate of 14,344 barrels per day during April.

No More Bargains

Enforcement of proration in the flush fields in the West Texas district has removed all distressed priced crude from the market, and producers in the Hendrick field, which has been the major source of cut rate crude prices, are now demanding the posted price of 60 cents per barrel, plus 10 to 15 cents per barrel handling charges on all oil shipped in tank cars. Contracts made prior to the starting of the proration movement for this field enabled tank car buyers to cover on their demand at the field posted price f.o.b. cars, or at a price that did not protect the seller on transportation and loading expense.

The opening of a new flush area in Winkler County, West Texas district, near two small pumping wells, last Wednesday by Gibson-Johnson et al is not expected to have any harmful effects on the West Texas crude situation, since movement has already been started to hold down the output of the big well as well as restrict drilling to a minimum, with the Texas Railroad Commission in charge of the situation.

Strength of the wholesale gasoline market throughout the Mid-Continent territory is evidenced by a slight decrease in stocks, with continued increased crude runs to refineries. Heavy buying for export from practically every refinery district in Oklahoma, Kansas, North Texas and North Louisiana at the time when the local retail market is being boosted, has increased the demand at refineries to the point where runs have been jumping rapidly. Mid-Continent refineries early in May were averaging approximately 460,000 barrels daily in crude runs, an increase of more than 15,000 barrels within the past month.

Sinclair's new posting on tank car gasoline last week of 7¾ cents lends considerable stimulus to the wholesale market, and while this price has not actually been met by other concerns generally, the spot market is given at 7⅜ to 7½ cents.

The crude situation in Oklahoma and Kansas continues to look better. Agreement of Little River operators May 10 to continue the field's shutdown for another month, until June 15, offers the greatest strength. According to this program, new wells will not start drilling until June 15, which means that the next crop of wells, hazardous to the market, will not be completed until around August 1, or later. In other words, no new crude is due to be added to the Greater Seminole area before that time, except for the regular inside completions, which incidentally have been failing to check the natural decline. If the Seminole territory continues to perform as in the past, excepting new outside completions, the five fields should be lowered in daily output 50,000 barrels by August 1. And, since sweet oils of the gravity of Seminole crudes are now in strong demand and getting premiums in many cases, a raise in price is due before Oklahoma's daily yield is lowered to such an extent.

Apparently there is no substitute now in sight to make up for such a loss as is scheduled to obtain in the Seminole area. With the Allen and Pearson-St. Louis fields the only areas in sight good for an increase, and with both of these areas coming under shutdown programs, Seminole fields' loss is not due to be checked.

With stored stocks now in strong demand and this demand continuing to increase as refinery runs are boosted to meet the demands for gasoline consumption, better prices for crude, especially high gravity stuff, is figured pretty generally to be but a few steps away.

In the face of a continued increase in production from the Long Beach field, crude from this field is commanding a premium of from 10 to 15 cents. Companies which have been adverse to paying above the market for oil have been numbered among those taking the crude at increased prices. It is not to be construed that an extensive fight is being waged for Long Beach crude, but that the demand for this particular grade is good because of its refining qualities and the better tone in the gasoline market. Independent refiners are largely dependent upon crude from the open market and they are willing to pay better than the market price for oil that exactly fills their requirements.

The 90,000-barrel increase from the Long Beach field has not had a demoralizing effect on the market for more than one reason. About 50,000 barrels of heavy production was shut in to offset the impending increase and refinery runs were increased slightly to fill the gasoline requirements of both domestic and foreign trade. The improvement in Mid-Continent conditions has also been felt in California.

While no advance has been posted in the retail price of gasoline, the wholesale market has shown a much better tone.

The possibility that the new California fields may soon become major factors is causing some worry, but the most likely of these—Potrero and Rincon—should not yield a large production in the immediate future. The development of deep zones in certain fields of the Los Angeles basin constitutes more of a threat than the new fields.

Details on Critical Fields

	Oil wells completed	Total initial production	Initial per well	Number producing wells	Daily production barrels	Daily production per well	Rigs up	Wells drilling
WEST TEXAS—								
Hendrick	161	610,575	3,792	167	159,010	952*	34	114
Church & Fields	181	201,110	1,111	179	43,950	246	1	1
Gulf - McElroy	60	52,050	867	60	15,270	254	1	1
Yates	198	1,309,950	6,616	191	50,330	264*	3	9
Totals	600	2,173,685	3,623	597	268,560	450	39	125
TEXAS PANHANDLE—								
Hutchinson County	1,097	544,720	497	968	40,900	42	6	26
Gray County	222	98,345	444	211	18,530	88	19	43
Carson County	177	58,695	332	147	7,330	50	2	8
Wheeler County	42	14,230	339	35	1,120	32	4	9
Totals	1,538	715,990	466	1,361	67,880	50	31	86
OKLAHOMA—								
Seminole	1,310	1,601,275	1,221	1,092	275,072	251	19	59

(*) Production partially pinched.

Winkler County Wildcat Heralds Pool Of Major Type

Effort will be made to have Hendrick proration rules apply to area opened by Gibson-Johnson well, but land owner says drill

By H. H. KING
Staff Representative

SAN ANGELO, TEXAS.—Flush production was developed about nine miles northwest of the Hendrick field, West Texas district, May 9 when Gibson-Johnson et al's wildcat test on the Leck-Daugherty land blew in making above 50,000,000 cubic feet of gas and estimated 4000 barrels of oil from lime horizon at a total depth of 3167 feet after drilling 480 feet into the lime. The well was allowed to flow about 45 minutes before closing the gate valve, and no tankage was available to make a test of the actual crude yield. Tankage is being erected to make a test of the oil flow this week, and also to determine if the well is making water, since water was present in the initial flow along with a quantity of mud used in holding back the heavy gas flow while drilling in with rotary.

This well is the first of the three completions on the lime high extending northwest from the Hendrick field into Lea County, New Mexico, to register a big flow of oil, and is conceded to be on the same producing structure that has two closely located pumpers about three miles to the northeast on the Scarborough ranch. This pool was uncovered one year ago when the Llano Oil Company's W. F. Scarborough 1, located at center of Section 1, Block C-22, began showing oil in lime at 3042 feet, and completed as a 40-barrel pumper at 3347 feet after plugging back from 3447 feet in October, 1927.

The strike made by Gibson-Johnson and associates heralds another oil area of the major type, with the two Scarborough ranch wells on the east edge of the structure, and a movement was launched promptly by nearby lease owners to have the Texas Railroad Commission apply a proration order that will restrict drilling and hold down production along the lines that new pools in the Greater Seminole area, Oklahoma, have been controlled. F. J. Adams, who is in charge of operations for the Gulf Production Company in North and West Texas with headquarters at Fort Worth, arranged for a special meeting of interested lease owners in Fort Worth on the following Friday.

The importance of prompt action was stressed at this informal gathering of lease owners, and locations made near the Gibson-Johnson well immediately after its initial performance by Texas Pacific Coal & Oil Company, Empire Gas & Fuel Company and others were held up by agreement. Lease and royalty owners will meet with members of the Texas Railroad Com-

Courtesy R. R. Penn

Members of crew and onlookers made scramble for safety when Gibson-Johnson et al's wildcat producer in Northern Winkler County, as shown in above photo, cleaned itself of heavy rotary mud prior to the oil flow.

mission in Fort Worth May 18 to perfect plans for curbing the new flush area, and in all probabilities it will be treated as a separate unit from the Hendrick field, although the commission's order on the Hendrick field could be made to apply.

Lease Holdings

Gibson & Johnson Interests maintain headquarters at Abilene, Texas, and have been active in wildcatting for some years. The Leck-Daugherty well was drilled on an 80-acre lease, being the north one-half of the southwest quarter of Section 3, Block 74, P. S. L. Survey. Jas. M. Kessler, Oklahoma City, and David Logan of Okmulgee own a one-half interest in the well and lease. Clint W. Murchison, Dallas, held the contract for the drilling of the well with rotary.

Large royalty interests held by Gibson & Johnson on all sides of the location represents their major holdings, and the cost of the well was realized before the strike was made through the sale of a portion of the royalty interests. Two 80-acre tracts, located south and southwest of the well, were acquired by Gibson & Johnson after the well began showing gas in the upper portion of the lime, thus giving them a total of 240 acres of leases.

Llano Oil Company sold a one-half interest in its Scarborough well and remaining acreage on May 19, 1927, to Roxana Petroleum Company, and the completed discovery well. Llano & Roxana's Scarborough 2, located a short distance northeast of the discovery well, was completed several weeks ago making 100 barrels daily on pump from broken lime at 3108-3304 feet, having logged the top of the lime at 2960 feet with a surface elevation of 2943 feet.

Llano sold leases to 16 companies from its original 10,000-acre block on the Scarborough ranch, mostly in 40- and 80-acre spreads through the block, and none of these companies have started developments. Llano & Roxana are moving in materials to drill Scarborough 3 in the northeast corner of the southwest quarter of southwest quarter of Section 2, Block C-23, and two miles northwest of the discovery well. Roxana paid more than $1000 an acre for lease on 40 acres in section 3 last week.

Land Owner Wants Action

Failure of other lease owners on the Scarborough ranch to start developments has resulted in a communication being sent by W. F. Scarborough to each company advising that no more rentals will be accepted in lieu of drilling. Most of the lease owners have paid up rentals until next October. The demands for prompt development by each company is supported by a threat of legal action, and in the meantime the lease owners are expecting an order from the Texas Railroad Commission to restrict drilling in this area after the meeting next Friday. It is expected that a compromise can be made with Scarborough regarding the development of his ranch.

The potential area of the Llano structure now appears to be as wide as the Hendrick field, while the prospects of extending across the State line into New Mexico are almost a certainty, since The Texas Production Company's Rhodes located in section 22 and only a few miles from the Winkler County line, has been shut in as a 100-barrel oil well with 20,000,000 cubic feet of gas at 3213 feet since last November, while Marland Production Company's J. S. Eaves (government permit) 1, Section 19-26S-37-E, gauged 65 million cubic feet of wet gas at 2927 feet last week. This latter well is directly in the trend of production from the Gibson-Johnson strike, and is to resume drilling with rotary as soon as baroid and mud can be replaced in the hole to control the gas. These two wells in New Mexico correlate uniformly on key formations with the three producers to the south in Winkler County.

Midland, Texas.—A crude supply for 12 months has been obtained by the Midland Refining Company from the Atlantic Oil Producing Company to operate a skimming plant on the Texas Pacific Railroad just east of Midland. The contract calls for a minimum delivery of 1000 barrels and a maximum of 2000 barrels of West Texas crude daily during the life of the contract, and the Atlantic Pipe Line Company will deliver the oil from leases owned and controlled by the Atlantic Oil Producing Company in Winkler County.

The Midland Refining Company is planning to start plant operations within the next 30 days, having taken a lease on the Peerless Refining Company's 2500-barrel daily capacity skimming plant now spotted on a sidetrack at Wortham, Texas. This plant is of the portable type, and was constructed by the Graver Corporation, Chicago. T. W. Sowell, Dallas, is president of the Peerless Refining Company, and owner of the rights to the portable skimming plant. A second and larger type of plant is now in use in Montana. The plant at Wortham is to be moved this week to Midland, and H. Engelhardt will be superintendent in charge of operations.

The Midland Refining Company has obtained a contract for the delivery of 150,000 barrels of fuel oil to the Texas Pacific Railroad, and will market most of its gasoline and kerosene output in and around Midland. V. E. Jackson, who has been identified with several of the larger independently owned plants at Wichita Falls for a number of years, will be the vice-president in charge of the Midland Refining Company, and T. W. Sowell is also an official of the company.

Sulphur Gas in Test

Casper, Wyo.—Some importance is attached to the 3,000,000 cubic feet gas flow which Utah Southern Oil Company has encountered in its Government 3, Section 29-56s-97w, in Big Horn County, Wyoming. The Embar sand was topped at 3222 feet; total depth is 3263 feet. The hole will be drilled deeper. Gas is reported to be heavily impregnated with sulphur.

HENDRICK FIELD OPERATIONS

The status of operations in the Hendrick field, West Texas district, at the close of last week is shown below by companies:

Company	Locations and Rigs	Drilling Tests	Tests in Big Lime	Completed Wells	Initial Produc'n	Average Produc'n
Amerada Petroleum Corp.	..	..	1	..	.....	.....
Arizona Mining & Eng. Co.	..	1	..	..	.....	.....
Atlantic Oil Prod. Co.	1	5	1	16	72,530	*13,550
Atlantic & Collett-O'Keefe	2	..	3	3	27,000	*11,055
V. T. Bolin & Co. et al.	..	1	..	..	.....	.....
The California Company	..	..	2	6	6,900	*3,315
Cranfill & Reynolds, Inc.	..	1	..	5	41,825	*17,780
Eastland Oil Company	..	..	1	..	.....	.....
Gulf Production Company	6	5	3	10	38,795	*14,410
Humble Oil & Refining Co.	2	11	1	17	63,020	*15,485
Independent Oil & Gas Co.	..	1	2	15	61,220	*7,315
Landreth Prod. & Roxana	3	7	2	8	40,765	*4,650
Magnolia Petroleum Co.	..	..	3	5	11,790	*1,835
Marland Oil Company	2	3	..	2	16,800	*2,015
Murchison & Cranfill Bros.	3	..	2	5	6,675	815
Prairie Oil & Gas Company	1	1	..	..	.....	.....
Pure Oil Company	5	3	7	12	44,625	*9,495
Republic Production Company	..	6	3	3	15,700	*14,215
Roxana Petroleum Corp.	1	3	3	20	89,080	*17,800
Sheldon-Burden et al.	..	..	1	..	.....	.....
Skelly Oil Company	4	1	1	..	.....	.....
Southern Crude-Dixie Oil	2	1	6	16	36,665	*11,180
Southern & R. A. Westbrook	11	6	12	14	25,150	*10,930
Texon Oil & Land Co.	1	1	2	4	16,175	*3,165
Winkler Oil Producing Corp.	..	1	..	..	.....	.....
Totals	44	58	56	161	610,575	159,010
Totals previous week	50	53	62	147	564.255	252,965

*Production partially pinched.

EXTENDING WINKLER PRODUCTION TO NEW MEXICO

Showing relation of the Gibson-Johnson et al's wildcat producer in northern Winkler County to the Llano-Roxana pumpers and two producers across the State line in New Mexico. Arrow shows location of the well.

COMPARISON OF FIELD STATISTICS BY STATES

State—	Completions 1928 Jan.	Feb.	Mar.	1927 Jan.	Feb.	Mar.	Producers 1928 Jan.	Feb.	Mar.	1927 Jan.	Feb.	Mar.	Gas Wells 1928 Jan.	Feb.	Mar.
Arkansas	25	16	14	49	30	47	7	7	7	49	16	21	4	1	1
California	45	60	59	80	70	64	36	46	48	75	66	61	..	..	..
Illinois	9	9	16	25	10	6	2	5	10	13	7	6	..	..	2
Indiana	7	26	7	17	12	9	4	13	4	12	7	4	..	5	..
Kansas	81	81	109	107	120	118	29	43	53	53	57	54	7	6	13
Kentucky	55	70	86	68	99	90	31	47	59	53	78	74	4	2	2
Louisiana	51	50	89	72	80	56	21	16	21	42	35	19	9	10	33
Michigan	10	..	2	24	19	19	6	..	6	20	17	18	..	..	..
Mountain States	14	9	11	37	37	47	12	7	10	25	27	37	1	..	1
New York	24	24	27	33	29	24	24	21	26	32	27	24	..	2	..
Ohio	96	95	101	130	157	103	37	48	36	64	75	58	37	34	35
Oklahoma	233	267	343	357	345	368	100	119	176	203	209	220	46	39	55
Pennsylvania	123	119	111	214	202	127	105	97	83	178	162	106	8	14	20
Tennessee	11	21	..	24	..	4	...	7	1	20	..	4	..	3	..
Texas	370	425	592	647	643	692	208	232	324	418	404	452	30	27	43
West Virginia	60	104	125	105	112	107	18	21	24	34	28	32	33	54	78
Totals	1203	1376	1693	1989	1965	1881	640	729	884	1257	1215	1190	179	197	283

Review Reveals "Depression" Largely Matter of Psychology

Comparison of development and production statistics for first quarter of 1928 with same period last year shows this year best

By A. R. McTEE
Staff Representative

A CHECK of figures on the petroleum industry covering the first quarter of 1928 compared with the same period a year ago, indicates that the present depression has to be accounted for at least in part outside the United States. In this country the real situation is about 50 per cent psychologically bad. The feeling that all is not well has roots set in certain unfavorable factors, the 67,258,000 barrels of stocks for instance, but aside from these abnormal stocks, figures show that in respect to production and field work, we are better off than we were a year ago.

The first three months of 1928 have not been altogether auspicious for the industry; West Texas, especially Winkler County, has added tenseness to conditions with its overproduction threat. There has been little encouragement in market trends and further additions have been made to stocks. Yet in spite of these disturbing elements definite progress has been made toward the return to a normal order of things.

Proration, for example, now has a stronger hold on operators than ever before. With Seminole as a sample of what can be accomplished through cooperation, producers are inclined to look favorably on steps to curb output if it can be done. Pecos County has been checked through the combined efforts of the companies operating there. California companies are now joining in an extensive shut-in movement to save their market. The Texas Railroad Commission is now working on a program to remedy the Winkler County trouble, and efforts are in progress at this time to bring about proration in the Venezuelan fields of South America. Thus it can be seen that the idea of definitely controlling the balance between crude supply and the ability of the market to absorb it is gaining ground rapidly. Ultimately, no doubt, proration will be effected in all countries where there is danger of top-heavy production.

The old problem of inadequate demand for refined products will still remain however because crude oil can be produced much faster than new markets can be created. But with definite steps toward controlling one factor in the situation, namely crude output, a more normal economic stability should follow. Controlling the crude output is really the crux of the whole situation. When this can be successfully done, the other problems will take care of themselves.

Below Last Year

Just now the daily average crude output is below what it was at this time last year by 82,000 barrels. The daily average for March, 1927, was 2,465,000 barrels, whereas for the same month this year the average was only 2,383,000 barrels.

Consequently the total output for the first quarter of this year was be-

COMPARISON OF PRODUCTION BY STATES FOR THE

State—	January 1928	1927	February 1928
Oklahoma	20,938,950	18,285,900	19,269,050
Kansas	3,357,300	3,653,045	3,205,950
Texas outside the Gulf Coast	16,222,950	14,514,720	15,623,750
Gulf Coast	3,888,950	5,895,550	3,358,200
North Louisiana	1,402,750	1,641,420	1,313,700
Arkansas	2,791,550	4,140,770	2,559,250
Eastern States	3,397,600	3,355,750	3,040,650
Rocky Mountain	2,387,000	2,579,575	2,190,950
California	19,130,100	20,389,475	17,827,750
Totals	73,517,150	74,456,320	68,389,250

FOR THE FIRST THREE MONTHS OF 1927 AND 1928

Gas Wells						Failures						Initial Production			
1927			1928			1927			1928			1927			
Jan.	Feb.	Mar.	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.	
6	3	2	14	7	6	28	11	24	230	1,610	423	730	958	921	
2	1	1	9	14	11	3	3	2	26,130	33,050	38,215	44,746	30,394	42,082	
3	..	..	7	4	4	9	3	..	11	121	159	230	266	64	
..	..	1	3	8	3	5	5	4	108	415	185	438	161	5,293	
4	5	4	45	32	43	50	58	60	8,405	10,275	14,542	6,928	9,699	10,486	
4	3	1	20	21	25	11	18	15	1,694	2,229	4,091	683	2,341	2,001	
8	12	6	21	24	35	22	33	31	4,159	11,162	6,850	9,770	5,458	3,359	
..	..	..	4	..	..	4	2	1	228	...	208	425	312	335	
1	..	..	1	2	..	11	8	10	1,967	576	3,789	6,440	6,665	21,765	
1	2	..	..	1	1	..	..	..	65	61	73	99	91	79	
38	53	26	22	13	30	28	29	19	575	2,194	1,498	1,805	2,696	1,553	
33	30	38	87	109	112	121	106	110	29,173	49,326	62,544	123,634	112,720	123,188	
30	30	15	10	8	8	6	10	6	200	412	281	471	510	657	
..	..	..	..	11	..	4	..	..	...	190	960	425	...	120	
18	17	18	132	166	225	211	222	222	323,803	224,403	359,019	117,930	111,446	108,833	
44	67	63	9	29	23	27	17	12	402	295	417	394	309	383	
192	225	175	384	450	526	540	525	516	396,150	336,319	555,613	315,948	284,016	321,119	

low that of the first three months of 1927 by 6,271,305 barrels. The total for January, February and March this year, from all fields was 212,784,050 barrels as compared with a total of 219,055,355 barrels for the same period last year.

Comparing the daily average for the two periods, in detail, we find that of the three months this year to be 2,370,966 barrels against 2,440,212 barrels in 1927.

The daily average by districts for the quarter is as follows:

	1928	1927
Oklahoma	655,583	660,840
Kansas	110,366	116,434
Texas (outside Gulf) Coast)	545,966	473,816
Gulf Coast	120,382	161,855
North Louisian ...	45,316	52,476
Arkansas	87,966	128,557
Eastern States	105,533	106,950
Mountain States	77,083	85,482
California	616,433	644,541
Totals 2,370,966		2,440,212

From these figures it can be seen that Texas outside the Gulf Coast is the only district with a higher daily average this year than last. In this one area we have a gain over 1927 of 72,150 barrels daily, all of which is from the Permian Basin fields in Crane, Upton, Pecos, Crockett, Howard and Winkler Counties, and as has been stated before, Winkler County is the only one of this group which is not controlled.

Production totals by states for the three month period are as given herewith:

Production Totals by State for January, February and March, 1927 and 1928:

State—	Production 1928	Production 1927
Oklahoma . ..	60,260,350	58,771,355
Kansas	10,043,000	10,306,450
Texas (Outside Gulf Coast)	49,698,050	42,809,420
Gulf Coast ...	10,964,050	15,158,295
N. Louisiana ..	4,092,850	4,729,210
Arkansas	6,004,400	11,636,225
Eastern States	9,604,900	9,633,125
Rocky Mountain States	7,017,650	7,662,550
California . ..	55,098,800	58,348,725
Totals 212,784,050		219,055,355

These figures show a decided increase in the output of Texas outside the Gulf Coast, with a minor gain in Oklahoma. The gain in Oklahoma is shown in spite of a lower daily average this year than last, due to the fact that during 1927 there were 90 days in January, February and March against 91 this year. Other fields all show decreases as compared with last year.

Much the same story is reflected in field work, with one difference, namely that of initial production. Completions for the first three months of this year dropped below those for the first quarter of 1927 by 1563 with the heaviest decrease in producers. Totals for the two periods showed 4272 wells this year against 5835 in 1927.

Something of the size of the producers brought in during the first three months of this year is indicated in initial production for the two periods. Last year initial production for January was 315,948 barrels, 284,016 barrels for February, and 321,119 barrels for March. This year January showed 396,150 barrels, February 336,319 barrels, and March, 555,613 barrels.

This heavy flush yield is accounted for largely in West Texas. Unusually large completions predominate in Pecos and Winkler Counties, keeping initial production high in spite of the relatively limited number of wells brought in.

California shows a little more than half the drilling that was going on last year. Oklahoma statistics are considerably below those for 1927, and Texas showed just about half the amount of activity until March. During March, this year, drilling increased in Texas, however, bringing total completions for the month to 592. During March, 1927, there were exactly 100 more completions in Texas than this year. In all the other states there is little variation in work as compared with the first three months of 1927, the small difference being in favor 1927.

Stock accumulations are available at this time for January and February only, but during these two months this year, the change in all oils amounted to 16,214,000 barrels, divided as follows: January, 7,074,000 barrels, February, 9,140,000 barrels. Total accumulations for the same two months a year ago were 16,021,000, a difference of only 193,000 barrels more this year.

Crude stocks increased from 473,712,000 barrels in January to 477,870,000 barrels at the end of February. Refined stocks went from 121,850,000 barrels to 124,682,000 barrels.

Refined stocks as compared with February, 1927, show a loss of 7,949,-

(Continued on Next Page)

FIRST THREE MONTHS OF 1927 AND 1928

March				Totals	
1927	1928	1927	1928	1927	
18,505,900	20,052,350	21,979,555	60,260,350	58,771,355	
3,253,930	3,479,750	3,399,475	10,043,000	10,306,450	
13,361,370	17,851,350	14,933,330	49,698,050	42,809,420	
4,438,940	3,716,900	4,823,805	10,964,050	15,158,295	
1,481,620	1,376,400	1,606,170	4,092,850	4,729,210	
3,608,080	2,653,600	3,887,375	6,004,400	11,636,225	
3,003,000	3,166,650	3,274,375	9,604,900	9,633,125	
2,363,900	2,439,700	2,719,075	7,017,650	7,662,550	
18,027,800	19,140,950	19,931,450	55,098,800	58,348,725	
68,044,540	73,877,650	76,554,610	212,784,050	219,055,355	

EDITORIAL COMMENT

IT would appear from statements made by officials of the International Petroleum Exposition that the Exposition which will be held at Tulsa in October of this year will be one of the best that has been held in some time. Several of the larger companies which have not exhibited during the past two years have indicated their intention of showing at the October Exposition, and a very large percentage of those showing last year have already renewed their contracts for the same or larger space.

The OIL WEEKLY is glad to see the interest displayed in the Exposition.

During the past few weeks there has been considerable talk of Dallas making a bid for the Exposition, and the State Fair Association which owns the Dallas Fair Grounds, has made a very generous offer to the equipment men in the event that they wanted to hold it in Dallas. The Fair grounds, buildings, etc., were offered to the exhibitors without charge. However, now that the directors of the International Petroleum Exposition have decided to go ahead and hold this year's Exposition in Tulsa and make it an annual affair, it is our understanding that Dallas will step aside. The position of Dallas is that if the Exposition is not held in Tulsa, Dallas would like to offer her facilities, free.

Plans are being made in Tulsa to overcome many of the hardships experienced by those attending last year's Exposition. The grounds are to be scientifically drained, better traffic conditions are assured through the extension of paving and street car lines to within the exposition grounds, covered walkways are to be built through the grounds, and general improvements throughout the Exposition will be noted.

When it is remembered that last year's Exposition was considered a most successful one, and in view of the anticipated increase in exhibits this year, as well as other improvements, we can look forward to the best Exposition to-date when the gates open in October of this year.

However, *The* OIL WEEKLY has one suggestion which it would like to make to the directors of the Exposition. And that is that the Exposition following the one in October of this year be held in the spring of the year instead of late autumn.

Our suggestion would be that the directors go ahead with their plans for this year, but that in 1929 there be no Exposition and that the date for the next one be set for April or May of 1930. Then, thereafter, we favor the holding of the Exposition each spring.

Holding the Exposition in the late autumn means running the danger not only of the heavy rains that have been experienced, but the danger of cold weather as well. Then, there are many other reasons why April or May are more ideal for a Petroleum Exposition. The same reasons which apply to State and County Fairs and which force their setting in autumn do not hold in a Petroleum Exposition.

The OIL WEEKLY has been a consistent supporter of the Exposition; has been a consistent exhibitor as well, and our idea on the change in date is not meant as a criticism of the directors, of which the publisher of *The* OIL WEEKLY is one, but is meant as a friendly suggestion looking to a more valuable Exposition than we feel can be had in the fall.

PLANS for the American Petroleum Institute Standardization and Engineering meeting, which will be held at Colorado Springs June 12 to 16, are rapidly taking form, and it appears that there is going to be a mighty fine attendance.

We understand that special cars bearing the American Petroleum Institute men are being planned from a number of oil centers.

We would like to suggest that it is not too early to start these plans right now and that reservation ought to be made at as early a date as possible.

"Depression" Matter of Psychology

(*Continued from page* 31)

000 barrels. Crude stocks for the same periods show a gain of 79,002,000 since February, 1927.

Imports of crude for January and February, this year, totaled 12,181,000 barrels as compared with 8,695,000 barrels during the same time last year. Refined products were nearer together, January and February this year showing 2,219,000 barrels against 2,697,000 barrels last year, a decrease of 478,000 barrels this year.

Exports of crude for the first two months of 1928 amounted to 2,475,000 barrels against 2,369,000 barrels last year, a gain of 106,000 barrels this year. Exports of refined products for the same periods showed 21,316,000 barrels this year against 19,748,000 barrels in 1927, a gain of 1,568,000 barrels favoring this year.

Domestic demand for the two months this year was 121,457,000 barrels as compared with 119,098,000 barrels last year. Total demand this year was 145,248,000 barrels against 141,215,000 barrels in 1927.

The number of days' supply of all oils on hand at the end of February, this year, was 246. Last year at the end of the same time the supply was estimated for 220 days, a gain of 26 days this year. The supply for January and February this year was 249 days against 224 days for the same period in 1927.

Thus it can be seen that the increase in total demand is not at all commensurate with the increase in the days' supply, over the year period.

Gas Men Study Scaled Rates For Industrial Plants

S. W. Meals elected chairman at Dallas meeting of Natural Gas Department; technical sessions interesting

DALLAS—Scaled rates seem to offer gas companies in the Southwest a fair solution to the problem of handling industrial consumers of widely varying requirements, it was agreed by gas men gathered here last week. Under such a plan the industrial consumer would pay for his gas in ratio to the expense involved in laying mains of sufficient capacity to meet his particular needs.

As it is now, it was pointed out, two customers may consume the same amount of gas and be billed equally, although facilities for handling the distribution will vary greatly. For example, one industrial plant may consume 24,000 cubic feet of gas in eight hours, thus requiring three times as much main capacity as another plant using the same amount, but distributed equally over the entire 24 hours.

The subject proved to be one of the most interesting to come before the annual meeting of the Natural Gas Department of the American Gas Association which opened here last Monday and continued through Thursday. Considerable discussion of the scaled rate basis was had from the floor of the convention at the Wednesday morning session following the presentation of a paper by P. McD. Biddison of the Natural Gas Producing Company of Louisiana, which touched briefly upon the subject.

It was the opinion of gas men from Texas and adjoining States that the scaled rate basis would relieve the present situation with which many companies have been confronted in disposing of gas to industrial customers and encouragement in the idea was given by visiting gas men from those sections of the country where similar arrangements have been found successful.

At the business session of the meeting Thursday morning, S. W. Meals, head of the Carnegie Gas Company, Pittsburgh, was elected chairman of the Natural Gas Department and Henry C. Morris of the Dallas Gas Company was made vice chairman for the coming year. Both men have been associated with the natural gas industry for many years and are well qualified to carry to conclusion the vast amount of work that has been assumed by the organization. Mr. Meals was vice chairman of the department during the past year and Mr. Morris was in charge of arrangements for the Dallas meeting.

Officers Named

Directors of the department for the coming year as elected at Dallas include: T. R. Weymouth, Oklahoma Natural Gas Company, Tulsa; T. B. Gregory, Pittsburgh; Raymond Davis, H. C. Cooper, Frank L. Chase, R. C. Sharp and John B. Tonkin.

Another important subject considered at the meeting here was the ways and means of combatting the operation of "wildcat" gas companies which are flooding the country and which have been particularly active in the Southwestern district as a result of highly exaggerated reports as to the profits being derived from the many large gas projects in this section. N. C. McGowan, retiring chairman of the department, first called this situation to the attention of the organization in his opening remarks and other speakers including H. O. Caster, one of the guests of honor at the banquet, emphasized the need for some action by the association to offset the harm being done through such concerns.

Mr. McGowan urged that members take every possible step to provide the association with statistics and figures that can be used to discourage the public in supporting these "wildcat" concerns through the purchase of stock.

More interest is being shown each year in the technical work of the organization and the meeting of the main technical committee early in the week was well attended by engineers and executives from all sections of the country. The report of this committee at the business session Thursday was also well received and members who have been engaged in directing the research are enthusiastic over the support that is being extended by the various companies.

Anti-Corrosion Research

It was suggested that the department take steps to secure all available data on the use of pipe coatings and coverings for the prevention of corrosion. A paper on the subject of pipe corrosion was presented at the Wednesday session by W. G. Hagan of the East Ohio Gas Company and was followed by some spirited discussion. Instances were cited by engineers showing how the use of coatings and coverings have prevented corrosion in certain parts of the country, whereas other representatives stated that they had had experience with lines that had been buried for more than 40 years without any protection that were still in good condition.

Following this paper on the program a "question box" was conducted with J. D. Creveling of Henry L. Doherty & Company, New York, presiding. Questions were requested from all present and those submitted were to be discussed from the floor of the convention. Many of the members took part in this session and some valuable information was secured on subjects dealing with "Construction Problems of Long Lines," "Welded and Coupled Lines," "The Benefits of a Technical Research and Testing Laboratory" and "Methods of Converting Coal Burning Domestic Furnaces to Gas."

Other technical papers on the program which received much attention included one by E. O. Bennet, chief production engineer of the Marland Oil Company, which dealt with the increasing use of natural gas for oil recovery and its eco-

Gathering of Gas Men Before Convention Hall at Dallas.

nomic effect on the natural gas industry. J. B. Best of the Houston Pipe Line Company delivered a paper on gas sands in South Texas.

Entertainment in the form of a smoker and annual banquet was provided with Karl F. Griffith of Dallas serving as toastmaster. Speakers at the banquet included H. O. Caster, O. H. Fogg, president of the American Gas Association, and J. J. Taylor of the Dallas News.

Registrations at the meeting totaled more than 1800.

Houston—Humble Oil & Refining Company's Simms-Smith 73 at Goose Creek came in Tuesday of this week as the deepest producing well in Texas, making considerable gas and approximately 700 barrels of oil, with the drill stem in the hole. The depth of the well is 6159 feet. Late Tuesday the gravity of the oil had not been determined, and the probable yield of the well when completed was still a matter of conjecture.

Goose Creek is one of only a few of the fields of the Gulf Coast where indications of a salt dome have not been found; and the usual assumption is that the field is above a very deep-seated dome.

Previous to the drilling in of Humble's new well, the Pure Oil Company held the record for deep production in the Gulf Coast, having completed Sweet Lake 4 at Sweet Lake, Louisiana, for 2000 barrels at 5924 feet; Sweet Lake 3 in the same field for 800 barrels at 5897 feet; and Sweet Lake 5 for 1500 barrels at 5660 feet. At Sweet Lake, as at Goose Creek, no indications of a salt plug have been found.

The deepest test that has ever been drilled in the Gulf Coast was Yount-Lee Oil Company's Gladys 6, at Spindle Top, which reached the depth of 6765 feet and was abandoned as a failure. The Yount-Lee Oil Company has drilled more than half a dozen tests below 6000 feet at Spindle Top, but the deepest production that it obtained was in its Fee 27 at 5879 feet.

Several deep tests were drilled also at Lockport, Louisiana, the deepest being the Lock-Moore 4, abandoned at 6418 feet. Two others went below 6000 feet, but were abandoned without obtaining production.

Department of Commerce Compiling Oil Laws

Washington. — The Department of Commerce is collecting and studying oil laws of foreign countries, with the object of publishing them. The project has been undertaken in view of the fact that many foreign countries have during the past several years enacted laws tending toward greater governmental restriction and supervision over exploration and exploitation of petroleum resources. The Division of Commercial Laws in the Bureau of Foreign and Domestic Commerce is carrying out this work, adding to its other services covering taxation and the general commercial laws of foreign countries.

Mexican Operations Continue Quiet Despite "Settlement"

TAMPICO, MEXICO.—Field operations in petrolific sectors of Mexico continue largely inactive despite the statements made some two months ago to the effect that the differences over the application of Mexico's petroleum laws and regulations had been satisfactorily solved. The end of the first week of the present month saw but four tests reported completed in the Tampico-Tuxpam embayment, in which are situated the major oil fields in the republic. The completions summed two small wells and two failures.

The completions, which are juxtaposed to Tampico in the northern fields, follow: Transcontinental Petroleum Company (Standard Oil Company of New Jersey) No. 14, Lot 3, Cacalilao, 200 barrels at 1805 feet; Cia. Petroleo Territorial, No. 309 Palangana, 50 barrels at 2277 feet. Mexican Sinclair Petroleum Corporation's No. 238 Cacalilao is dry at 2048 feet, while the drilling subsidiary of the National Lines (railways) reports its No. 88 Ferronales as "being under observation" at 2458 feet. The depth of this last named test marks it a palpable failure.

At the same time there were only 35 strings of tools reported as actually making hole in the districts under discussion, 25 strings in the northern fields and 10 strings in the southern fields, the latter being the light oil district. Eight locations are rigging, three in the south and five in the north.

The companies responsible for the major part of the activities are: Transcontinental Petroleum Company, Mexican Sinclair Petroleum Corporation, Penn Mex Fuel Company and Mexican Eagle Oil Company, Ltd., and Cia. Mexicana-Holandesa "La Corona" S. A., the last two being subsidiaries of the Royal Dutch Shell. In the main the few other tests actually making hole are scattered among small companies and individual operators.

The only other actual oil field in Mexico not contemplated in the Tampico-Tuxpam embayment is in the Isthmus of Tehuantepec, in the southern part of the republic. Mexican Eagle Oil Company, Ltd., has this field and it keeps an average of four or five strings of tools in operation there. The production of the Isthmus fields in 1927 (the highest in its history, perhaps) was about 2,700,000 barrels. There are two wildcats drilling at this time in the State of Coahuila, one of which (No. 2 Cuatro Cienegas) is shut down at 3314 feet, while the other is a deep hole at 4290 feet.

With the exception of the Penn Mex Fuel Company, which is proceeding with a measured pace to develop its Paso Real field in the light oil district south of the Tuxpam river, the other companies actually drilling in the Tampico-Tuxpam embayment are simply feeling for "high spots" in sectors that have already been more or less thoroughly drilled and drained.

Mexican Petroleum Company and Huasteca Petroleum Company, the two subsidiaries of the Standard Oil Company (Indiana) continue absent from the active field operations reports. This also applies to such well known companies as Mexican Gulf Oil Company, The Texas Company, New England Fuel Oil Company, the last named a subsidiary of Magnolia Petroleum Company, while Marland, which has not been active in its extensive Limon holdings since last September, has only one string of tools in operation at this time.

Lightning Strikes Three West Texas Tanks

Fort Worth, Texas.—Three crude oil tank farms in and near the Hendrick field, West Texas district, were ignited by lightning during a series of storms late last week, with a loss of one life and two large steel tanks containing a total of about 79,000 barrels of oil. Roxana Petroleum Corporation's one million-barrel concrete reservoir, located at Monahans, Ward County, was struck twice early Saturday morning, but the aerial system of lightning arrestors protected the tank and its contents, except that the gas arising from the ventilating flues were ignited. The burning gas was cut off from the main tank, and no damage involved, although the tank contains nearly 700,000 barrels of fresh crude.

Independent Oil & Gas Company's tank farm in the Hendrick field proper was ignited about noon May 12 by lightning, and a teamster lost his life in the fire, while two other employes of the company were severely burned. The 55,000-barrel tank and its contents of about 25,000 barrels of oil were lost, and the fire spread to four nearby rigs, as well as destroying Independent's electric dehydrating plant. Southern Crude Oil Purchasing Company's tank farm at Wickett was also struck by lightning, but the fire was confined to one 80,000-barrel wood-roof tank, with a loss of about 54,000 barrels of oil.

Breckenridge, Texas—Roxana Petroleum Corporation has disposed of its producing leases in the deep lime and semi-shallow sand horizons in the Southbend field, Young County, to Atkinson-Sandfer and Daniels of Breckenridge for a cash consideration of $111,130. The properties include 28 wells making a total of 125 barrels daily and 690 acres of leases. The purchasers have made a specialty of salvaging old leases in the Central West Texas district, and will pull the pipe on most of the wells obtained from Roxana, but will operate the wells that offer a profit.

Earlsboro Extension Well Flows 180 Barrels Per Hour

Indicated that sixth of ten wildcat tests south of Little River is failure in Wilcox; Allen field showing strength and may be shut in

By WALLACE DAVIS
Staff Representative

TULSA.—Indications of a failure in the sixth of the 10 South Little River test wells to reach Wilcox sand, the opening of probable strong Wilcox sand production one-half mile east of Earlsboro and the establishing of proof of strength in the deeper pay in the Allen field were the highlights in Oklahoma fields last week. The opening of Gypsy Oil Company's Wilcox sand discovery well in Sumner County after being shut in since August 12, 1927, for production of around 600 barrels, was the most interesting move in Kansas.

An operators' agreement to extend the Little River shutdown 30 days to June 15 is of paramount importance.

Greater Seminole production showed little change May 14 as compared with a gauge for a week previous, and after fluctuating in both directions during the week, settled at approximately the same figure. The shutting in of the last new producer in the restricted area served to offset what little new oil was added in the inside area.

Production by fields for the gauges of May 14 and May 7 was as follows:

Field—	May 7	Wells	May 14	Wells
Little River.....	44,720	118	47,060	124
Bowlegs	68,756	313	67,420	312
Earlsboro	95,875	287	95,767	284
Seminole City ..	53,921	304	53,791	302
Searight	14,733	68	14,656	69
Total 278,005		1,090	278,694	1,091

Shutdown Extension

Agreement among operators to extend the shutdown program an extra 30 days to June 15 means that the next crop of important wells in the potentially high productive area south of Little River will not be due for completion until around August 1, or later, and that the daily output of the territory will thus be considerably lowered before this new production can possibly be had.

Carter Oil Company's Fish 1, in the northwest of the southwest of Section 12-7-6, northernmost of the 10 test wells in the restricted area, the sixth of the group to reach Wilcox sand, was almost definitely established as a failure Monday, although a show of oil was had at that time at 4353 feet in the second Wilcox sand. This well topped the upper Wilcox at 4263 feet May 11, and in to 4310 feet had a hole full of water. Drilling was continued, and the base of the Wilcox was had at 4318 feet. What is considered the second Wilcox horizon was encountered at 4353 feet, where the rainbow showing was obtained through a hole full of salt water.

Carter's Larney 1, in the northwest corner of Section 24-7-6, was expected Monday to be the eighth of the 10 test wells to reach Wilcox sand, and the sixth to produce. It was drilling Monday in Viola lime at 4255 feet, with a slight showing of oil after topping this formation at 4202 feet.

Roxana's Hotulka 1, in the northeast of the northwest of Section 23-7-6, found the Viola lime 22 feet higher than Carter's Larney well, and Monday of this week was preparing to deepen from 4200 feet. Aside from the three mentioned above, T. B. Slick's Williams 1, in the northeast of the southeast of the northeast of Section 15-7-6, is the only one of the 10 test wells remaining, and it is due to be the last one to reach pay or failure depth. It was drilling Monday at 4185 feet in Viola lime topped at 4181 feet.

Aside from the group of test wells yet to complete there are two offset locations to wildcat producers yet to be determined, both of which will produce three days and then be shut in, in event of finding production. They are Magnolia's Harjo, offset to Snowden & McSweeney's Tiger 1 on the southwest, which Monday was running six-inch pipe at 3770 feet; and Magnolia's Reed 1, southwest offset to Independent's discovery well in Section

Agreement Extended Another 30 Days in Little River

Tulsa—Little River operators voted to extend the shut-down of that area 30 days, to June 15, when Reiter-Foster and Blackwell Oil & Gas Company consented to enter the agreement. Blackwell, after protesting against possible drainage from producers in the northeast quarter of section 11-7-6, was voted the privilege of starting a location in the southwest of the northwest of the southeast of section 11, 45 days ahead of north offset operators, but not until after June 15.

Ralph Pringle, vice president of the Independent Oil & Gas Company, declaring this shut-down move could not be continued indefinitely, offered a substitute in the form of a proration measure as a means of continuing conservation in force. His plan, which provides that Greater Seminole production be held to 300,000 barrels, allowing Little River the difference between this level and the combined daily yield of the other four fields. Although it received considerable adverse criticism, a copy of the plan has been taken for study by each interested company for a general consideration later.

The plan would allow Little River production to increase as other Seminole pools decreased and the output would be prorated as in West Texas, allowing a certain prorata for each 40-acre unit. It would be in effect from time of adoption to November 15. Each unit would be allowed a daily production equal to the quotient obtained by dividing the total number of units into the total output permitted without reference to the number of wells on such unit. Twenty-acre tracts would be counted one-half unit. No restrictions would be placed on drilling or methods of production under the plan.

The plan would pinch all wells now completed or that may be completed prior to July 15 in the South Little River pool, a maximum of 100 barrels daily. Each unit would be considered separately, no unit being allowed to increase its output because of failure of another unit to produce its quoto.

According to the plan, any new production not known now which would be henceforth around these five fields would not be included in Seminole production.

In event any reliable buyer in the area desired taking additional crude and required such of umpire by letter, the advisory committee would be authorized to increase the unit figures to meet such a demand in excess of the stipulated 300,000 barrels.

An advisory committee of five or seven would be named to work jointly with Ray M. Collins, umpire, on arbitrating all disputes and its decision would be final. The agreement would be terminated prior to November 15 by a vote of the majority of companies involved.

While some considered the plan favorably, other operators doubted its value, declaring it allowed too much production, others dislike the drilling of so many wells with the little production to result.

23, which was drilling plugs Monday at 4098 feet. On completion of these two offset operations and the remaining four of the test wells, the south Little River territory is due to rock along quietly until June 15, according to the agreement.

There is one exception to the agreement. Blackwell Oil & Gas Company is being allowed 45 days' start on other operators at one location on its 40-acre tract in the northwest quarter of the southeast quarter of Section 11. It is not due to start, however, until June 15. This tract offsets Gypsy's wildcat producer on the north and is just south of Pure's Harjo producer, which the first week in May helped to link up Little River proper with the south extension by flowing around 3700 barrels.

Skelly Oil Company and Atlantic Oil Producing Company's Cherry 1, in the southwest of the northwest of the southwest of Section 6-9-6, approximately one-half mile east of the eastern edge of Earlsboro production, topped the Wilcox sand Sunday morning, and flowed 1234 barrels the first 22 hours from 4412-24 feet. Tuesday it increased to 180 barrels per hour after a 25-quart shot. It is unusually low structurally, but has the ear-marks of a strong producer, and offset locations were being figured. Gypsy Oil Company controls the west offset acreage, and staked a location for Sango 6, following finding of Wilcox in the Cherry well.

Allen Field

The Allen field of Pontotoc, Hughes and Seminole Counties continued last week to show its strength, and has risen to a place so important that operators were called to meet May 16 in Tulsa for planning a shutdown in the field. Ninety wells in the Allen field last week had a daily average of 20,292 barrels, and 42 wells were drilling at the close of the week. The value of this once unimportant area was suddenly realized late in April, when the deepening of old producers in the Cromwell sand was found to more than double former production. Present wells drilling are going to this new depth of around 2800 feet, and plans of the majority of operators are to deepen old producers in the field. Homa-Okla Oil Company's Adams 4, in the northwest of the northeast of the southeast of Section 19-5-8, last week flowed 600 barrels from 2761-95 feet, the same sand level from which Westheimer & Daube's Wade 1 made good production just previously, and it is this horizon which most of the operators are seeking.

Kansas Wildcat Important

The most interesting thing in Kansas fields during the past week was the flowing of Gypsy Oil Company's Douglas 1 wildcat discovery in Sumner County of 452 barrels after being shut in since completion August 11, 1927. Production is moving through a four-inch line to a loading rack at Drury, and Wentz Oil Corporation, the only close-in acreage owner, has a rig up for an offset in Crane 1, in the center of the southwest of the northeast of the northwest of Section 23-24-2w. Wentz Oil Corporation owns the north half of the northwest quarter of the section, directly offsetting the discovery. On being opened, the Gypsy well produced 20 barrels of water with the oil, but this is thought to be from an accumulation of water over a long period of time, rather than present water production. The well was deepened from the former bottom at 4499 feet to 4505 feet to find the bottom part of the sand lighter in color and apparently carrying neither oil nor water. Top of the Wilcox in this hole was 4492 feet. The well is approximately 20 miles from the nearest field, being that distance northwest of the Braman field, in Northwestern Oklahoma.

Gypsy Oil Company's Renton 2, in the northeast corner of Section 11-7-6, the south edge of Little River field proper, swabbed 620 barrels Sunday from two feet of Wilcox sand topped at 4400 feet. Magnolia's Cruse 3, a north offset, was making 900 barrels on air following completion early last week. Pure Oil Company's Harjo 1, southwest of the Renton 2, and two locations south of Carter's old extension, Jackson 1, flowed 3588 barrels Sunday after producing more than a week.

Logan County

The Roxana pool of Logan County continues to prove itself as being one of the steadiest producers in Oklahoma. Five wells there, all owned by Roxana Petroleum Corporation, produced a daily average of 4941 barrels last week, which includes one stripper of around 15 barrels in the Stephens 1. This production has not fluctuated over 100 barrels in nearly three months, and any slight drop registered is consistently regained naturally. Nine wells in the Lovell field, five miles south, had a combined yield for the same period of slightly more than 1100 barrels.

Gas Men Endorse Tulsa's Petroleum Exposition

Tulsa.—Space reservations for the 1928 International Petroleum Exposition and Congress indicate that there will be more exhibitors this year than in 1927. Officials of the exposition base this on the fact that so many of the exhibitors of last year are reserving space and that many as asking for enlarged quarters.

The exposition was indorsed by the American Gas Association at its annual meeting in Dallas May 7 to 10. The resolution of indorsement follows:

"Whereas, through the untiring efforts and devoted leadership of a group of unselfish leaders in the petroleum and gas industry of America, the International Petroleum Exposition has become a permanently established institution, and,

"Whereas, said exposition has become worldwide in its scope of influence and activity, and,

"Whereas, as workshop, laboratory and display room, it has been of inestimable value to the scientific, technical and educational advancement of the nation's second largest industry, and,

"Whereas, said exposition is a non-profit making institution, whose sole purpose is to advance the welfare of the industry and improve the industrial, social and economic life of the nation, and

"Whereas, the aims and purposes of the exposition are in turn and in harmony with the aims and purposes of our association and those of other organizations and associations affiliated with the petroleum and gas industry, now therefore,

"Be it resolved, that the American Gas Association, in regular session assembled, do hereby endorse the International Petroleum Exposition, express our appreciation of the services rendered the industry by its board of directors, and pledge our moral support to the further advancement of what has come to be known as 'The World's Fair of the Oil and Gas Industry'."

Dawson Again Heads Mid-Continent Scouts

Tulsa.—Rex L. Dawson, assistant to the chief scout for Carter Oil Company, will continue to serve as chairman of the board of directors of the Mid-Continent Oil Scouts & Land Men's Association, having been re-elected to that position at a meeting of the directors in Tulsa on May 12.

All officers of the association are members of the board of directors. Members of the board for the coming year are: Fred J. Hill, Mid-Continent Petroleum Corporation scout, Shawnee district, president of the association; C. R. Welch, land man for Comar Oil Company, Ponca City, first vice-president; R. P. Brewer, scout for Barnsdall at Wichita, Kansas, second vice-president; Simon Crites, Phillips Petroleum Company, Bristow, secretary-treasurer by re-election; John Young, Gypsy Oil Company, Ponca City; H. Langspecht, Roxana, Bristow; C. E. Hewitt, Mid-Continent, Okmulgee; G. W. Greenlee, Mid-Continent, Cushing; B. B. Braly, Barnsdall, Seminole; D. D. Thompson, Atlantic O. P. Company, Shawnee; J. R. Craun, Carter Oil Company, Pawhuska, and E. J. Gordon, Pure Oil Company, El Dorado, Kansas.

The association's constitution and by-laws were amended to make chief scouts, heads of land departments and their assistants eligible for active membership rather than as honorary members as formerly. It was also voted that the association would send Fred J. Hill, president, to the convention of the National Oil Scouts' Association at Amarillo, Texas, May 21-22.

Daily Average Was Greater During April Than March

Principal development during month was arrangement for proration of runs in Winkler County; field activity decreased in all sections

By A. R. McTEE
Staff Representative

IN spite of a gain of 14,150 barrels in daily average output for April as compared with March, the total production of crude oil in the United States for April amounted to only 71,961,100 barrels. The difference between that figure and 73,877,650 barrels, the March total, was made possible by one day less in April than in March. Daily averages for the two months showed 2,398,700 barrels for April against 2,383,150 for March, or a gain of 14,150 barrels for last month.

Most of the gain is attributed to Texas, particularly the West Texas group of fields principally Winkler County. Notwithstanding the handicap of one day as compared with March, Texas outside the Gulf Coast increased its output 684,150 barrels in April. The Gulf Coast district yield was below the March figure.

Both Oklahoma and California slumped in daily recovery, thereby moving a little further from the center of the group of states exerting a depressing influence on the market structure.

The most significant development in the Mid-Continent was the preparation for proration in Winkler County, Texas. The plan did not actually start operation until May 5, but all the preliminary work was done during April. The May figures for Texas will show direct results of this step, as the Winkler County output was cut practically in half when the wells were pinched, production dropping from nearly 300,000 barrels to 150,000 barrels daily.

With Pecos County, the other West Texas major field, restricted several months ago, accomplishment of proration in Winkler County should react favorably throughout the entire industry. Co-operation to keep down production in Seminole seems to have a permanent hold; California seems sold on the idea too, and with West Texas falling into line, there is every reason for encouragement.

It is quite probable that what now appears to be a nine-mile extension to the Winkler County pool, a new 10,000 barrel well, will be controlled through co-operation and if this does come about, a precedent will be set for handling subsequent new pools brought in at unfavorable times.

UNITED STATES PRODUCTION

Following is the gross estimated production of crude oil in the United States for April, as compiled by the American Petroleum Institute. There is a slight difference in the totals herewith shown and those compiled showing individual field production, due to the fact that these figures are final, whereas the others are unrevised estimates.

State—	Daily Average	Monthly Totals
Oklahoma	620,450	18,613,500
Kansas	112,150	3,364,500
Texas (Outside Gulf Coast)	617,850	18,535,500
Gulf Coast	118,850	3,656,500
North Louisiana	46,900	1,407,000
Arkansas	83,450	2,503,500
Eastern States	107,000	3,210,000
Rocky Mountain	78,500	2,355,000
California	613,550	18,406,500
Totals	2,398,700	71,961,100

Effect on Market

Predictions are now being made that if proration in Winkler County can be kept in operation for five or six months, all West Texas will profit by an increase in crude postings. With other leading districts showing strong tendencies to decrease their output, strength in the crude market may be felt before six months.

Field activity decreased noticeably throughout the country generally, resulting in 207 less completions than were shown in March. Texas and Oklahoma showed the strongest tendency to lessen work and consequently the heaviest drop in initial production. Statistics in detail gave 1486 completions comprising 772 producers, 216 gas wells, and 489 failures. Initial yield amounted to 397,825 barrels, or an average of 515 barrels per producer. For March the average was 628 barrels per well.

West Texas

The conservation efforts of the Texas Railroad Commission in ordering the daily output of the Hendrick field, Winkler County, cut one-half to a maximum production of 150,000 barrels effective May 5, puts the district out of the picture as a disturbing influence in the general Mid-Continent crude situation. During April the commission also assumed responsibility of keeping the lid clamped down on all production from the deep lime horizons in the Chalk-Roberts pool, located on the Howard-Glasscock County line, and has indicated that similar steps will be taken to curb production in all threatening areas bobbing up in the future.

The Hendrick field held the spotlight during April, with production climbing to a high mark of about 300,000 barrels daily towards the end of the month, and potential production estimated at close to 500,000 barrels daily. The peak level of drilling activities will probably not be reached until the latter part of May, even though production is held down by order of the railroad commission. Companies and individuals in the north end of the field are rushing work on developing virgin leases so as to have as many 40-acre units as possible on production, thus earning a greater percentage of the allowable daily production, which is prorated on a basis of producing units and potential production.

Proration of pipe line runs by Humble in the Church & Fields area, Crane County, accounted for a continued slump in production there while the Yates field's daily output remained restricted to about 52,000 barrels daily in accordance with the voluntary proration plan. Other sections of the West Texas district offered only routine developments. Wildcatting efforts centered on the Gibson-Johnson et al's Daugherty test, located in northwestern Winkler County, where a flow of 28,000,000 cubic feet of dry gas was encountered at 3070 feet, and also which has been completed for about 10,000 barrels of oil.

Central West Texas

The outstanding strike made by wildcatters in the Central West Texas district during April proved to be Cranfill & Reynolds' J. B. Eubanks 1, which ushered in a new high gravity oil producing area in the Cross Cut-Fry dis-

trict, Brown County, with an initial flow of 755 barrels daily at 1210-25 feet. Several offset producers were added to this area before the close of the month by the pool discoverers, and the success of the strike is leading to more wildcat efforts in a general trend between the original Cross Cut and Fry pools.

Several new gas strikes, and deepening of old wells led to a revival of drilling in Coleman County. Amerada Petroleum Corporation's semi-wildcat on the W. L. Knox farm, Travino survey, registered an initial flow of 12,000,000 cubic feet of gas at 1606-28 feet, but will probably be deepened in search of oil. Cunningham et al's Jennings 2, was estimated good for 35 barrels of 36.1 degrees oil on pump after shot of 10 quarts in hard sand at 1172-77 feet, thereby opening a new shallow oil area. Except for a shallow pool developed in the northeast corner of Coleman County some years ago, the oil and gas strikes have not spread over any appreciable area in this county, and new discoveries carry little market significance. Activity in Shackelford County centered on the Matthews ranch during April as result of the Cook sand pool uncovered late last February leading to the completion of a number of good wells at the 1200-foot level. Developments were somewhat quiet in Eastland, Stephens and Callahan Counties, although several minor extensions to proven areas in the former county were registered .

North Texas

Panhandle Refining Company's wildcat strike on the Daugherty land, located in Southwestern Jack County and several miles northwest of Bryson, opened a new light pool for the North Texas district from Strawn sand at 2957-67 feet, swabbing 240 barrels daily. The discoverers control most of the close-in acreage, and a conservative development program will be adhered to. Archer and Young Counties contributed a substantial increase in drilling during April as result of drilling in new pools opened earlier in the field, and extensions given some of the established pools. Wilbarger County and the south half of Wichita County registered fresh activity, and a slight increase in oil production, while the prospects of an early increase in crude oil prices has had a tendency to interest operators in cleaning out and deepening old wells. Cooke and Montague Counties contributed only a small number of new completions. A new shallow pool for Throckmorton County was promised late in April from McCurdy et al's Reynolds 1, Section 19, Block 2, A. B. & M. Survey, with an estimated production of 10 barrels daily at 1343-56 feet.

Panhandle

Gray County's group of high gravity oil pools continue to lead all sections in the Texas Panhandle in activity, and a few extensions were recorded during the month, but outstanding completions were lacking. The growing market for natural gas produced in the district is directly responsible for the steady drilling in Wheeler, Moore, Potter and parts of Carson and Gray Counties, and will continue for some time, as the marketers of natural gas are forced to keep building up a reserve supply of gas. Daily production in the Panhandle has declined to a level that is slightly below the actual pipe line outlet, and local refineries have been offered five and ten cent premiums above the posted price for crude.

Gulf Coast

Gulf Coast declined in daily average output as well as field work. Wildcatting progressed throughout the district without any definite results indicating new production.

Humble Oil & Refining Company is drilling a second test on the Sugarland Dome, Fort Bend County, and has location made for a third well. Vacuum Oil Company is drilling a test about two miles southeast of the Sugarland Dome.

Humble and the Sun Oil Company each have location made for a test on the Moss Bluff Dome, Chambers County.

Pure Oil Company is testing Lost Lake Dome and has had a slight show of oil in Lost River 1, at 3670 feet. This dome is also in Chambers County.

Southwest Texas

Much interest was aroused in a new producer between the Luling and Dale field, Caldwell County. The well came in late in April and was rated as a 2500-barrel well from 2241 feet. The oil is 35.5 gravity. The well produced by heads and has gradually decreased its output until it is now completely dead. Efforts are being made to put it on the pump as soon as possible.

Production is from the Del Rio, a sandy lime. It is believed that the original source of the oil is from the Edwards lime, the same formation from which Luling is producing.

Acreage surrounding the test is held in several small blocks and now there are seven other wells drilling in the area. All indications are that the field, if it proves to be such, will have to be small, since a number of dry holes have been drilled practically surrounding the producer. On the other hand the possibility of a long shoe-string area, like Luling, Powell, and other Balcones Fault fields, may result. Past experience has shown that these fields narrow to one location in width, and are rarely more than three locations wide at their greatest width. Thus it might be that the previous dry holes in the Branyon district have little real meaning as to the potentialities of the area.

The producer is one-half mile from the Magnolia's line from Luling to the Dale field.

Arkansas and Louisiana

About 12 miles northeast of the old East El Dorado field, in Arkansas, in the Champagnolle area, a slight drilling boom is now under way. This fol-

(Continued on page 47)

PAST TWELVE MONTHS

The record for the past twelve months is an interesting study for comparison purposes, the following table giving field statistics for all states in the Union.

Month—	Completions	Producers	Gas Wells	Failures	Initial Prod.
May, 1927	1,777	1,060	166	551	400,022
June	1,726	1,049	178	499	359,380
July	2,036	1,219	238	579	486,489
August	1,642	982	207	453	439,735
September	1,870	1,092	228	551	380,851
October	1,541	870	225	446	322,603
November	1,651	901	205	545	367,657
December	1,857	1,020	311	256	522,536
January, 1928	1,203	640	179	384	396,150
February	1,376	729	197	450	336,319
March	1,693	884	283	526	555,613
April	1,486	772	216	498	397,825

UNITED STATES FIELD STATISTICS

Following are the completions showing producers, gas wells, failures, and initial production of crude by states, for the four weeks ending April 28, as compiled by the Oil Weekly:

Arkansas	8	4	..	4	1,932
California	51	45	..	6	61,570
Illinois	4	1	..	3	3
Indiana	9	1	4	4	23
Kansas	93	45	7	41	17,143
Kentucky	102	69	3	30	3,397
Louisiana	67	12	28	27	7,150
Michigan	14	7	1	6	947
Mountain States	17	14	3	..	7,529
New York	26	25	..	1	66
Ohio	66	37	16	13	3,227
Oklahoma	298	130	49	119	33,370
Pennsylvania	111	83	21	7	293
Tennessee	9	4	1	4	78
Texas	518	272	31	215	260,793
West Virginia	93	23	52	18	304
Totals	1,486	772	216	498	397,825
Last month	1,693	884	283	526	555,613

Gauge Shows Hendrick Potential 643,973 Barrels Daily

Producers now number 170 and operators are rushing completions to get more participation in runs; may raise recovery permitted

By H. H. KING
Staff Representative

SAN ANGELO, Texas—Official gauges and estimates on potential daily production of all wells in the Hendrick field was placed at 643,973 barrels by Umpire Harold Pardee early this week, with eighty-two 40-acre units on production. This data was computed to determine the allowable production for each operator during the next period of proration which begins Wednesday morning, May 16, with a limit of 150,000 barrels daily production allowed by the Texas Railroad Commission for the entire field.

Republic Production Company, which was reported last week as having failed to reduce its production in the field to the proration quota, fell in line with other producers after officials of the company met with the proration advisory committee and members of the Railroad Commission in Fort Worth, May 11. All producers in the field are now observing the proration order, according to J. D. Collett, chairman of the advisory committee, and actual production in the field is running slightly under the allowed amount, owing to difficulty in regulating the daily output of the big wells in the field.

Only about 36 wells were given the official one-hour open flow gauge by Umpire Pardee to determine the potential production for the next 15-day period, as the balance of the wells were estimated for potential from current run tickets. Total producing wells are now above 170, and completions are being made in greater numbers, since each operator is striving to register as great a potential as possible and also to get more 40-acre units on production.

Acting on the advice of the advisory committee, the Railroad Commission Tuesday morning altered its proration order to permit owners of new wells completed between gauging periods to flow same daily to the extent of their earned acreage allotment, thus removing the danger of ruining good wells by shutting same in until the next gauge. Under this plan a well completed before the close of May on a 40-acre unit without production heretofore would be allowed to flow about 915 barrels daily, or a fraction of this amount if other wells are producing on the same unit.

Some agitation has been started by Hendrick field operators to have a larger production quota allowed for the field, since a market is available for a greater amount than now being produced. Humble is buying 5000 barrels daily from Gulf and also purchasing all that Marland is allowed to produce, with others in the field turning away crude buyers for tank car shipments. Humble is going to take on more outside oil shortly in this field. The advisory committee of seven operators are planning to make a study of the situation shortly, and if conditions justify a higher production the committee will make recommendations accordingly to the Railroad Commission. The latter has indicated heretofore that a higher production will be permitted upon the approval of the advisory committee.

The next important extension to the Hendrick field is expected from Murchison Oil Company and Cranfill Brothers Oil Company's Hendrick 1, located about three-quarters of a mile north of present production, and at last reports was cementing pipe on account of a split joint after coring a good show of oil and gas at 2725 feet. This test is on a five-acre tract, surrounded on all sides by Southern and Westbrook's lease, and a proration problem may arise.

Completions in the Hendrick field during the past week were confined to the proven area. Water encroachment in the field is showing signs of modifying with back pressure being carried on most of the wells, and some operators report a noticeable reduction in the volume of cut oil. This change in the water situation will add to the life of the flowing wells. Two big gas wells in the field proper have blown in as oil wells since the enforcement of proration. Atlantic's Grisham-Hunter 1 blew in making 10,000 barrels initial, five per cent. cut, at 2978 feet after five months, and Humble's Grisham-Hunter 3, came in as a 2000-barrel oil well after blowing as a big gasser since last January, at 2898 feet.

Shallow oil production in the Chalk-Roberts pool, Howard County, was given a westward extension early this week when Marland and Texon's Settles 2 "A" Section 158, began flowing 10 barrels oil per hour from sand at 1302 to 1360 feet.

Republic Agrees to Proration Rule

Houston—After having given its field men instructions to proceed in Winkler County without regard to the new proration order, the Republic Production Company early this week reversed its action and the potential production of the company in the Hendrick field was being determined in order that the proration order could be put into effect on the company's wells.

The Republic Production Company, according to officials, based its original action in not heeding the Texas Railroad Commission's order on the ground that the company was not sure of the legality of the order. The commission stood pat on its order and representatives of the Republic Production Company went to Austin last week to consult with the commission.

The commission assured the representatives of the company that they were going to proceed with the order.

While in Austin the representatives of the company were assured that the commission, after consultation with the attorney general, had ample authority for its action. On Friday of last week the Republic Production Company representatives met with the umpire, the proration committee and representatives of the Texas Railway Commission, and authorized the umpire to proceed in determining the potential production of the company's Winkler County wells.

Standard Installing More Lights in California

San Francisco.—Three additional high intensity aviation beacons are to be installed immediately by the Standard Oil Company of California—one at San Diego, one at Portland, and one at Seattle. This will give Western aviation five great lights on the Pacific coast, the Company having recently put into operation a ten million candlepower beacon on Mount Diablo and another in the Merced Hills near Los Angeles.

The beacons now operating have proved most successful. The Diablo light has been seen from the air 150 miles, from the ocean 80 miles, and from the ground at Sutter, California, 100 miles.

The new lights have the approval of the Airways Division of the United States Department of Commerce. Experts of the Department will shortly visit the three cities concerned and will designate the actual sites for the beacons, selecting points where the lights will be of the greatest use to night flying aviators.

The new beacons will be similar to those already installed.

These are beacons with 36-inch lenses and reflectors, which develop a ten million beam candlepower. They are on 75-foot steel towers and revolve six times a minute.

PERSONAL MENTION-MEN YOU KNOW

Mr. and Mrs. Fred W. Dallas and family have requested publication of the following: "We are deeply grateful to our neighbors and friends who rendered us loving assistance and acts of thoughtfulness in the loss of our baby boy, Burt. The many floral offerings so beautifully arranged at St. Paul's Methodist Church were indeed a solace to our hearts, as were messages of sympathy from out of town friends. Especially do we thank young ladies in telephone offices for their efficient services in our behalf."

Mr. Dallas is drilling and production superintendent of the Rycade Oil Corporation, Houston.

G. F. Smith, secretary-treasurer of Continental Oil Company, Denver, and H. J. Taylor, chief accountant in the production department of the company, were in Tulsa last week on business.

Ed. Powell has recently become Oklahoma-Texas distributor for the Ohio Injector Company, and will maintain headquarters in Tulsa. He was formerly connected with Frick & Lindsey, of Pittsburgh.

O. J. Tuttle, sales manager of the refining division of Empire Oil & Refining Company, Bartlesville, Oklahoma, is back on the job after being confined to his home by illness since the middle of April.

E. J. Nicklos, general superintendent of The Texas Company of Oklahoma, Tulsa, was named by Seminole operators May 10 to succeed the late Howard N. Cole on the Seminole shut-down committee.

C. O. Rison, general superintendent for Indian Territory Illuminating Oil Company and Delmar Oil Company, returned May 10 to his headquarter office at Bartlesville, Oklahoma, from a three weeks' business trip to Utah.

Burdette Blue, vice-president and general manager of I. T. I. O. Company, Bartlesville, Oklahoma, made a business trip to Tulsa last week and attended an operators meeting held for the purpose of outlining further shut-down plans in the Little River field.

T. W. Crosbie, sales representative for the Graver Corporation in West Texas, spent several days last week in Tulsa on business. Mr. Crosbie maintains headquarters in Fort Worth.

John M. Wheeler and James G. Cloud, Operators Oil Company officials, of Tulsa, made a business trip to Boston, Massachusetts, the second week in May.

R. A. CRAWFORD

First vice president of the Lone Star Gas Company, with headquarters at Dallas, Texas, one of the outstanding natural gas executives in the country.

W. A. Miller, Sr., and W. A. Miller, Jr., of Lima, O., president and general manager, respectively, of the Illinois Pipe Line Company, are making a tour of inspection of company properties in the Rocky Mountain region. They are spending the present week in Montana.

Tom Moore, Tulsa representative for the Kewanee Boiler Works, has returned from a trip through the Texas oil fields.

John Sloan, of the Union Wire Rope Company, Kansas City, will have charge of the company's Portland, Oregon, office.

Marland Election

Ponca City, Okla.—E. W. Marland was re-elected president of the Marland Production Company when the stockholders of the company met in Wilmington, Delaware, last week. W. H. McFadden, who retired several months ago from his position as vice-president of the company, was re-elected. Whether or not he will continue in active service is not known.

The directorate of the company was reduced to 15 members from the former group of 23. The board is now composed of the following: E. W. Marland, W. H. McFadden, George Whitney, W. C. Potter, V. F. Taylor, A. B. Lawrence, F. R. Kenney, C. C. Brown, G. R. Marland, Walter Miller, G. G. Shallenberger, C. N. Westfal, H. P. Snyder, A. R. Brunker and E. N. Potter.

C. C. Stephenson will continue to serve as the company's secretary, and John E. Hall will serve as secretary to E. W. Marland, but neither will be members of the board of directors.

J. E. (Brick) Elliott, president of the Elliott Core Drilling Company of Los Angeles, is making a tour of the Mid-Continent fields in his airplane. He made the trip from Los Angeles to Pecos, Texas, in 10 hours and will spend the next week in the Gulf Coast territory and the upper Mid-Continent.

Casper, Wyo.—Headquarters of Empire State Oil Company are to be moved from Jamestown, New York, to Casper and will be established in the building recently taken over from the New York Oil Company. W. B. Look of Jamestown, treasurer of the company, is to move from Jamestown to vision of company properties in Central Wyoming. Heman D. Curtis, vice-president and general manager, plans to give his time and attention to operations in Northern Wyoming and Montana. Mr. Curtis plans gradually to retire from active participation in the management, and eventually to give his entire time to his two large ranches which are situated near Thermopolis.

Long Beach Production Increase Slow Process

New wells completed during week add 12,000 initial but only 4,000 daily average; Basin wildcats are getting attention

By BRAD MILLS
Staff Representative

LOS ANGELES.—A survey of the week's developments in the Long Beach field discloses several factors which will have an important effect on both the peak and life of the field. The tendency to drill deeper—even below 7000 feet—the possibility of extensions beyond the present producing limits, the large number of wells testing wet, new locations, the number of wells killed to deepen and the slow decline of the deep producers are all elements that are beginning to be felt.

Six wells with a total initial production of 12,000 barrels were completed during the week, boosting the field total about 4000 barrels. The increase was small when compared with the new production but each week the new wells are carrying an additional burden and it usually requires at least two barrels to show a new gain of one barrel in field production. Several wells were killed to deepen and the loss of this production was felt. With six new locations—one for each completion—the status of drilling operations remains unchanged. The average initial production of 2000 barrels for the week's completions proves that the field will not pass from the picture for some time to come. Five wells showed water on the final production test but most of them were located on edge tracts. By plugging back to a safe level, a good production has been obtained in several wells testing wet below 6200 feet. Drilling below 7000 feet has ceased to be a novelty in the field, with five wells drilling below this depth. Shell's Brown 1, now coring at 7476 feet, is the deepest test in the field and one of the deepest ever drilled in a proven area. Not satisfied with production around 6500 feet, the operators seem anxious to test the very bottom of the deep zone. This tendency to drill deeper has postponed the completion of dozens of wells originally intended to include only a few hundred feet of new sand.

Richfield's Denni 6, regarded as one of the most important wells yet drilled in the field, made a very disappointing showing when completed at 7401 feet, initial production having been only 1091 barrels. When it is considered that about 2200 feet of sand was included below the final shutoff, some doubt as to the wisdom of drilling below 7000 feet arises. A 5¾-inch oil string was landed on bottom, but whether the casing was perforated the entire distance below 5200 feet has not been made public. The oil string was cemented through perforations at 5197 feet. There is a question as to whether the perforations were below the old producing level, but the action of the well indicates that pressure is being lost at some point. The effect of perforating the 5¾-inch oil string only in the bottom of the hole is also problematical. Regardless of the cause of the small production, a 1000-barrel producer at 7400 feet is certainly not as economical as a 2000-barrel well at 6500 feet.

The General Petroleum Corporation's Boyer-Kelly 5, a workover, was the best completion of the week with an initial production of 3500 barrels from 6590 feet. The oil was 30.7 gravity and showed a cut of 2.5 per cent. The company also got a good completion in K. and H. 8, which was completed at 7032 feet with a production of 2200 barrels. The crude was 30 gravity, with a cut of four per cent. The Herndon Petroleum Company, independent producers, jumped into the select class with the completion of No. 5. The well was completed at a 3000-barrel producer from 6308 feet. The California Eastern Oil Company's Capital 1, which was deepened from the upper zone, was recompleted at 5685 feet with a production of 1350 barrels. The oil was 31 gravity and clean. Shell did not maintain the furious pace set a month ago but managed to complete one small well. The company's Alamitos 31 came in with an initial production of 1250 barrels from 6360 feet. The oil was 31.6 gravity and cut 2.8 per cent.

Deep One at Ventura

Climaxing a series of deep completions in the Ventura field, the Associated Oil Company has reached a depth of 7600 feet in Lloyd 100, which soon will be, if successfully completed, the deepest oil well ever drilled. Steadily pushing down from 7000 feet, first one operator and then another has held the record since the first of the year. The Associated made arrangements to complete Lloyd 100 at 7530 feet but the excellent condition of the hole made deeper drilling attractive. The company is anxious to further explore the lower levels of perhaps the most remarkable body of oil sand and shale in the world. Ventura is not the only field in California which is producing from below 7000 feet, but it has had many completions below this depth where its closest competitor—Long Beach—has only two.

A production test of the M. K. and T. Oil Company's Foster 1, located just outside of the Ventura field, is being made. The well was drilled to 4995 feet, with about 125 feet of sand to be treated. A string of 11¾-inch casing was cemented at 4605 feet and a full string of 6⅝-inch landed at 4880 feet. In addition, a 4¾-inch liner has been run for the test. The M. K. and T. lease is south of the field and, from a geological standpoint could not very well be located on a separate structure. Due to the dip of the main structure, production should be found very deep unless a freak condition exists. The showings in the shallow sand are considered significant, however, and a production test will reveal the true possibilities of the well. Shallow oil is found near the center of the field, and it is possible that a corresponding formation has been found on the flank at a greater depth.

Interest in the Rincon field is centering around the Miley Oil Company's Hobson 1, which has reached 4385 feet and which should go a long way toward proving the value of the formation between 4000 and 5000 feet. Below 4350 feet the well showed a rich oil sand but the formation probably will not be tested until a much greater depth is reached. Hobson 1 made a poor showing around 4000 feet and the company will go to 5000 feet or even deeper if necessary. The Chanslor-Canfield Midway Oil Company has completed C-1 with an initial productiion of 700 barrels from 3160 feet. The well is the best yet finished by the company and offsets much of the trouble encountered in trying to complete a series of wells around 2600 feet. The oil is 29 gravity and shows a very small cut. The only halfway satisfactory level yet found in the field lies between 3100 and 3200 feet and it is from this series of layers that nearly all production is coming. Field production has climbed above 3000 barrels and the intensive development of 100 feet of sand would bring this total to a much higher figure. A thin sand free from water is better than a thick formation

of questionable value and the operators are chiefly concerned in finding the favorite point a short way below 3000 feet. Production from this level declines rapidly, however, and while it may be possible to develop a large production, there is little likelihood of maintaining it until a more stable zone is discovered.

The California Eastern Oil Company's Horowitz 1, which was recompleted 10 days ago as a 30,000,000 foot gasser, continues to hold the center of interest in the Seal Beach field. The large flow of gas was obtained by cutting the 4½-inch casing at 4500 feet, plugging back to this depth and perforating the 8¼-inch casing from 4400 to 4450 feet. The Bixby zone, from which the gas is coming, has not been rated as a heavy producer, having failed to make an impressive showing in other wells drilled nearby. The California Eastern logged the sand in drilling the well and plugged back to perforate after producing the well for a time from below 5000 feet. A large gas production in the Alamitos Heights or townlot area at this time will prove valuable in flowing a large number of declining wells, much of the gas from the California Eastern well is being used for this purpose. The fact that other companies did not find a high gas pressure in the Bixby zone indicates that the California Eastern may have tapped the coveted pocket. The gasoline content is low, showing less than a gallon per thousand cubic feet. Drilling has been temporarily halted at 6950 feet in Marland's Selover 12, the deepest well yet drilled in the Seal Beach field. The company is milling on the three-inch drill pipe and due to the diameter of the hole and the great depth is making little progress. Selover 12 has a very interesting history, having produced at several higher levels. Standard's San Gabriel 14, a deep test of the main part of the field, made a very poor showing when tested at 6640 feet. Production totaled 600 barrels, of which only 200 barrels was oil. Judging from the action of the Standard's well, the deep zone is not as dependable in the main field as in the townlot district, where four small wells have been completed. George F. Getty has been able to correlate the log of his wildcat on Section 14-5-12 with those in the Alamitos Heights area and stands a chance of picking up a sand above 6000 feet. The well is now drilling at 5540 feet.

Potrero

The Associated Oil Company is again testing Cypress 2, the 1000-barrel, 48 gravity producer completed a month ago in the Potrero field. Production during the first day showed a large percentage of water but this was due to the method used in killing the well after the original three-day test. The cut has been reduced to less than five per cent and production settled to 860 barrels. The company is undecided whether there is a small leak in the oil string or the sand is showing a small percentage of water. A 30-day test will reveal the possibilities of the area and will have an important effect upon future developments within a radius of of more than a mile. Cypress 2, which showed much promise as a gas well, has been shut in. This test has had a rather stormy career, having been heralded far and wide as Potrero's discovery well. It did produce at a commercial rate for a short time and was recognized as an oil well, although it made a very unimpressive showing after the initial test. Its action was at least sufficient to cause the drilling of Cypress 2, which has all the earmarks of a remarkable light oil producer.

The Pacific Eastern Production Company has topped the oil sand at 3830 feet in KCL 2, the second test drilled in the new Fruitvale field, proving the well to be located higher on the structure than the original producer. A string of casing will be set on top of the sand. The company's KCL 3 is checking closely with No. 2 and should find the oil sand at approximately the same depth. The present depth is 3546 feet. The three wells should not only give some idea of the shape of the structure but should disclose the possibilities of the field as well.

The Chanslor-Canfield Midway Oil Company has drilled through about 500 feet of oil sand and shale in No. 29, Section 8-32-23, an offset to the Republic Petroleum Corporation's 1100-barrel producer on Section 7-32-23, and will cement a string of 10-inch casing at 2100 feet for a production test. The well has been drilled to 2620 feet but additional hole will be made before the test. Future developments in the district hinge largely upon the outcome of the Chanslor-Canfield-Midway well, which is the second ever drilled to the deep sand in this district.

Union Avenue

The Union Avenue area, near Bakersfield, has temporarily passed from the list of critical wildcats, after 10 months of suspense. The Pacific Eastern Production Company has suspendeed operations in both No. 1 and No. 2, following a series of tests in both wells. The first well staged several sensational performances early last August, but the company never was able to make it a commercial producer. The second well was drilled on the theory that No. 1 was not located properly, but it has proved equally as disappointing as the original test. Both wells showed gas and oil but failed to produce on actual tests. No. 1 made the most impressive showing at 4392 feet, having blown gas and sprayed oil on several occasions when the control valve was opened. The rush for leases was the greatest ever witnessed in the bed of the San Joaquin valley. Geologists formerly had frowned on the theory that oil would be found in large quantities in the valley and leasing had been far from intensive. The Pacific Eastern has located a third well northwest of the original test.

After a lull of several weeks, during which developments had been somewhat doubtful, the Round Mountain field has again demonstrated that it is destined to become one of the major producing areas of Kern County. The Honolulu Consolidated Oil Company has completed No. 55, Section 18-28-29, with an initial production of 940 barrels from only 2125 feet, making it the largest well yet drilled in the field. The oil is 16.6 gravity and shows a negligible cut. Like most new fields in California, the Round Mountain area has looked both good and bad and additional drilling will be necessary to determine the size and potential production of the structure.

Wildcats

Several wildcat tests in the Los Angeles basin are being closely watched because of their important bearing upon future developments in their respective areas. The Ohio Oil Company has reached 5833 feet in Miller 1, Section 9-4-11, but has failed to find an important showing at any level. The well, which is the first wildcat drilled by the company in California, is located about midway between the fields along the northeastern edge of the basin and those lying along the coast, and is being drilled partially on the theory that a connecting link between the two series is possible. One well was drilled about a mile away, but was not carried below 4000 feet. McCollom and Taylor's (Prairie) Sterling Price 1, Section 13-5-11, is drilling in a sandy shale at 2400 feet. The location is about four miles northeast of the Huntington Beach field and near oil seepages. The discovery of oil at this point would make another line of fields in the Los Angeles basin possible. The well is located about the same distance from Huntington Beach as the average stretch between the chain of fields lying along the Newport-Beverly uplift. Shell's Stern 1, near Fullerton, has again entered the interesting class of wildcats, following the penetration of about 40 feet of sand between 4965 and 5005 feet. A string of 8⅝-inch casing was cemented at 4970 feet. The California Well Drilling Company has been unable to develop commercial production in Moss 1, Section 11-4-13, the deepest wildcat in the Los Angeles basin, after swabbing for several days. The well was drilled to 7555 feet, with a string of 4¾-inch casing cemented through perforations at 7350 feet. The 200 feet of sand has shown very little oil and gas and much water. The well is located between the Long Beach and Dominguez fields and layers of oil sand at such a point are considered significant. The San Clemente Oil Company is redrilling at 5185 feet in Peck 1, once a very promising wildcat in the Hawthorne area. The hole was originally drilled to 5765 feet but failed on a production test.

Record of Deep Producer Reveals Long Beach Drilling Conditions

AN excellent idea of drilling conditions the Long Beach field may be gained by a study of the Shell Company's Martin Community 4, which was recently completed as a 1750-barrel producer from 7060 feet. The well was the first completion below 7000 feet, and the careful records kept by the Shell Company give the operator who is not accustomed to production from such a depth a knowledge of conditions in perhaps the most remarkable, and certainly the most prolific field in California.

The Shell Company keeps a very careful record of the various equipment used in each test in the field. An exact copy of the company's drilling equipment follows:

Drilling Equipment

Regan crown block.
Regan traveling block.
Six-inch Union tool swivel.
Eight-inch Regan hook.
Seven and one-half inch Union ball bearing draw works.
1225½ Union Tool ball bearing table.
12 x 12 Union Tool twin drilling engine.
14 x 7½ x 14 Union Tool pump.
12 x 6¾ x 14 Union Tool pump.
Drillometer.
MacClatchie Cathead.
Steel Safety Finger.

The casing record is very interesting, showing a total of nearly 16,000 feet which ranges from 18-inch down to the 5¾-inch oil string. The 18-inch was cemented at 929 feet, the 11¾-inch at 2729 feet, the 8⅝-inch at 5040 feet and the 5¾-inch was landed at 7053 feet, or only seven feet off bottom. The last named was cemented through perforations at 5263 feet, giving the well about 1800 feet of producing formation. The 18-inch string was run merely as a surface conductor. The 11¾-inch string was the first, and also may be termed as the final, water shut-off. The top of the oil zone was found at this level and all water above the 4800 feet of potential producing oil sand and shale was conquered with less than 3000 feet of casing. The 8⅝-inch string cemented just below 5000 feet shuts off all of the upper part of the producing zone which has been drawn on for years. In cementing the casing at this point, the porous and depleted layers are not given a chance to absorb the flow from the virgin territory below. In some instances in other parts of the field, it has been observed that a string of casing cemented above the lowest level at which the adjoining wells had been producing failed to function properly. The back pressure from the well forced some of the oil and gas from the lower layers into that part of the sand which had been partially deleted, thereby defeating the true purpose of the casing. The 5¾-inch oil string was cemented through perforations at a point which would further eliminate the possibility of leakage from the lower to the higher layers.

Top of Hills

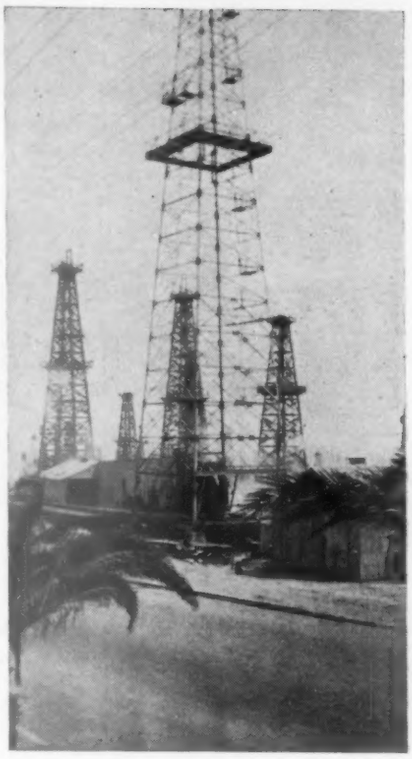
Martin 4 is located almost on top of Signal Hills, at an elevation of 330 feet. It was the first well drilled below 6200 feet in this part of the field, and practically every foot below this point was cored. The test was a pioneer and a careful coring record below 6000 feet will eliminate much of this process in future tests. Theoretically, it would have been possible to produce the entire 4800 feet of oil sand and shale. From a practical standpoint, however, this could not be done. The particular area has produced so much oil at various levels that a large part of the oil and gas from the deep zone would be lost to the porous and depleted layers above. The core barrel proved its true worth and functioned satisfactorily through 860 feet of oil sand and shale. Cores were taken at the average rate of 32.5 feet per day from an average depth of 6630 feet.

In a 27-inch hole, the drilling crews average 232 feet per day from the surface to 930 feet. An average of 138.5 feet was made in drilling the 17-inch hole from 930 to 2731 feet. Between 2731 and 5041 feet, the average fell to 67.9 feet per day. In the last drilling stretch before coring was started, the average from 5041 to 6200 feet jumped to 96.6 feet in a 7⅝-inch hole. All drilling below 2731 feet was done in sand and shale and the average was considered very good.

The consistency of production in Martin 4 has attracted wide attention. While the initial production was not large, this fact has been offset by the steady yield. A 10-day period of production follows:

Date	Prod. Bbls.
April 8	1712
April 9	1709
April 10	1706
April 11	1706
April 12	1706
April 13	1708
April 14	1708
April 15	1704
April 16	1702
April 17	1699
Average	1706

Martin 4 has already lost the record as the deepest producer in the field, but if future completions below 7000 feet produce at a more consistent rate, they are entitled to full honors.



Shell Company's Martin 4, the first well completed below 7000 feet in the Long Beach field.

DRILLING TIME ON DEEP PRODUCER

Martin 4 was spudded December 4, 1927, and completed April 2, 1928, the total elapsed time having been 121 days. The drilling record follows:

Depth	Inch Hole	Footage	Days	Feet Per Day
930	27	930	4	232
2731	17	1801	13	138.5
5041	10⅝	2310	34	67.9
6200	7⅝	1159	12	96.6
7060	7⅝	860 cored	26½	32.5

Total time making 7060 feet of hole—89½ days.
Average 78.88 per day.

Incidental Time—

27-inch Hole.

Reaming	1 day
Cementing 18-inch casing	1 day

17-inch Hole.

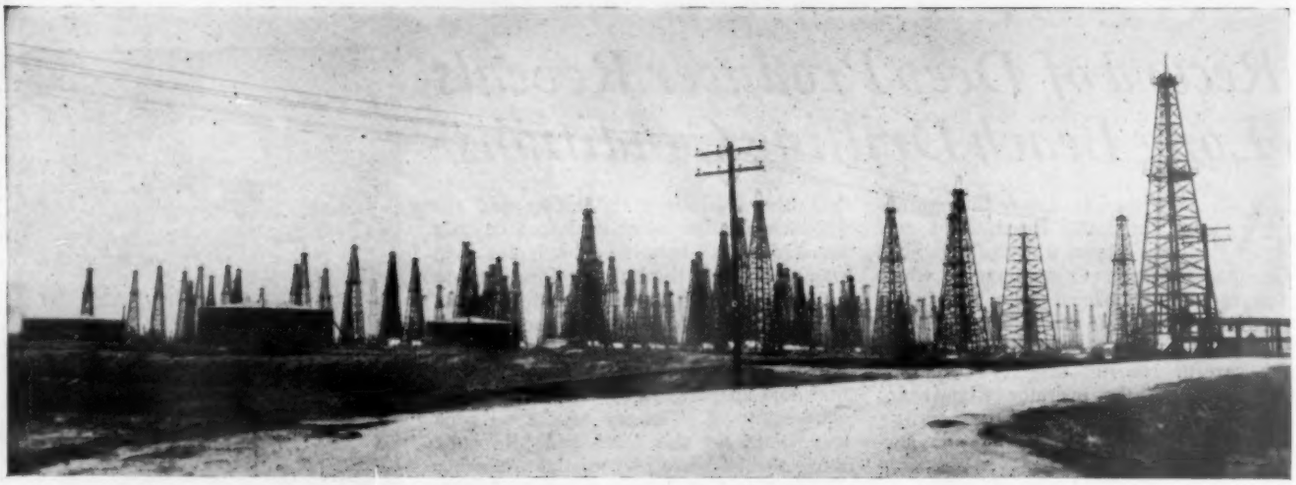
Mudding, cementing and testing 11¾-inch hole	12 days

10⅝-inch Hole.

Reaming	2 days
Mudding, cementing and testing 8⅝-inch casing	8 days

7⅝-inch Hole.

Reaming	1½ days
Making up 5¾-inch oil string and cementing	3 days
Standing cemented	2 days
Drilling out and bringing in well	1 day
Total incidental time	31½ days
Total drilling time making hole	89½ days
Total time overall	121 days
Footage per day overall	58.35 feet



View of the new part of Spindle Top field, showing close spacing of the wells.

Yount-Lee Spindle Top Operations Substantial and Efficient

By JACK LOGAN
Staff Representative

BEAUMONT, TEXAS.—Recovering approximately 32,000 barrels of oil daily at Spindle Top, the Yount-Lee Oil Company is now producing about 80 per cent of the field's output; and as time passes that percentage is due to run still higher, since the company has practically all of the undrilled proven acreage of the field.

By virtue of its large Spindle Top production, the Yount-Lee company still ranks first in daily recovery among the producers in the Gulf Coast, and according to the last published quarterly production report for Texas, was holding second place insofar as production in the entire state was concerned. It assumed that position, second only to the Gulf Production Company, in the third quarter of 1926, and has retained it in each of the subsequent quarterly reports, the last one published having been for the fourth quarter of 1927.

At Spindle Top the Yount-Lee Oil Company now has 150 wells producing or being drilled, and is operating 14 rigs in the field. Drilling at this rate, it has been keeping its production well up around 35,000 barrels a day, and may be expected to do so for a good many months to come, as the company still has about 50 acres which are proven for production but yet undrilled.

This proven acreage embraces a strip 3600 feet long and 600 feet wide, located on the McFaddin 500 acres in the southeast part of the present field. In addition to this proven acreage, however, the Yount-Lee Oil Company has extensive holdings which may in due course of time prove to be productive. The Yount-Lee leases and fee lands extend around the entire field, practically, and as new wells are being drilled, the productive area is being extended farther and farther around the dome.

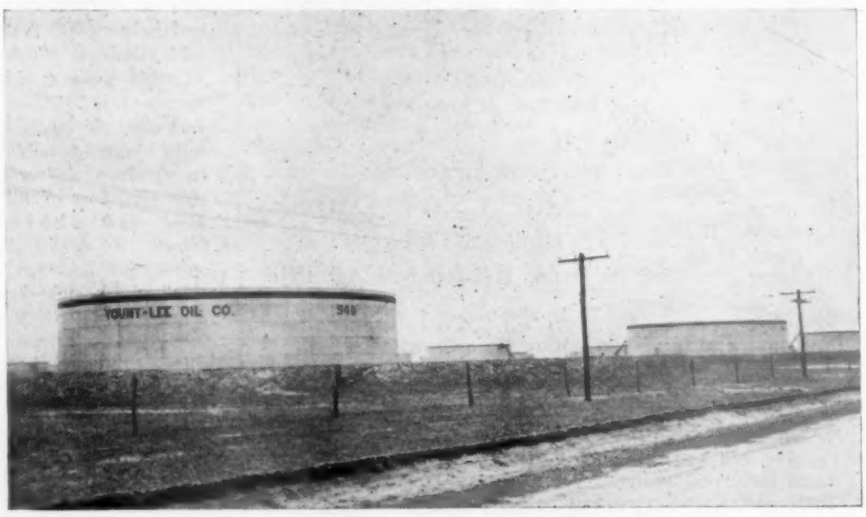
Yount-Lee Oil Company has recovered from the Spindle Top field close to 25,000,000 barrels of oil—within a period of about two years. It was this company which discovered the deep flank production of the dome, completing its McFaddin 2 as the discovery well on November 14, 1925, and the McFaddin 3 on January 13, 1926, as a 5000-barrel well which put the field on a boom.

Adjacent to the field, the company has a tank farm consisting of 48 aluminum coated 55,000-barrel steel storage tanks. In preparing the site for the tanks, considerable expense was entailed in terracing and providing for proper drainage of the land, and the tank farm is now exceptionally neat and well-kept.

Part of the Yount-Lee production is taken each day by various pipe lines, and the balance is put into storage. By pipe line The Texas Company, Gulf, Sun, Humble and Magnolia each take some of the Yount-Lee production.

The tank farm is connected with docks which the company built on the Neches River, several miles distant. The Yount-Lee docks are about five miles below the city docks of Beaumont, and about midway between Magnolia Petroleum Company's docks at Beaumont and Pure Oil Company's refinery at Smiths Bluff.

At its docks on the river, the company has modern loading facilities,



Yount-Lee Oil Company's tank farm at Spindle Top consists of 48 of these aluminum coated 55,000-barrel tanks.

being equipped to load 10,000 barrels of oil per hour on tankers. The river at this point is sufficiently deep to accomodate vessels drawing 30 feet of water, and is wide enough for the boats to turn around.

At this loading station large quantities of oil are put on tankers bound for the Eastern Seaboard and for foreign countries. The vessels pass down the Beaumont-Port Arthur ship channel into the Gulf of Mexico.

At considerable expense but great convenience, the Yount-Lee Oil Company has built its own shell roads, about eight or 10 miles in all, through the Spindle Top field, through the tank farm, and from properties in the field and tank farm to the loading docks on the river. These roads are unusually well built and well kept, and are more like improved public highways than like the average private road. Before the present system of roads was put in, it was practically impossible to travel or transport materials over the areas which the roads now traverse.

Among other things which the company has done at Spindle Top was the putting in of drainage ditches throughout the properties, for taking care of salt water and for properly draining the ground in rainy weather. Outside companies are also allowed the use of these ditches. Considerable expense was also sustained by the company in building numerous good bridges over these ditches and canals.

Yount-Lee Oil Company's loading docks on the Neches River, where 10,000 barrels of oil per hour can be loaded on sea-going tankers.

Pipe lines leading to the Yount-Lee docks. The company built the shell road shown alongside the lines.

Besides its production at Spindle Top, the Yount-Lee Oil Company has about 3000 barrels daily production in other fields of the Gulf Coast, including Hull, Sour Lake and South Liberty, Texas, and East Hackberry or Kelso Bayou Dome, Louisiana. Districts in which the company is running rigs at present include South Liberty, Texas, and Hackberry, Welsh and Evangeline, Louisiana.

Before its discovery of the deep production at Spindle Top, the Yount-Lee Oil Company was a small concern, with an office force of three men occupying three rooms, but with some success in deep drilling at Sour Lake already to its credit. Working with Marrs McLean, independent operator who deserves much of the credit for the discovery of the flank production at Spindle Top, Frank Yount, president of the Yount-Lee Oil Company, blocked up 900 acres in a block reaching around the dome, after various other companies had drilled on all sides beyond the cap rock production in search of deep pay, and after the leases were obtained the wildcatting started, with the result that deep production was found on two sides of the dome with the drilling of three tests.

Today the Yount-Lee main offices occupy all of the top floor of a large office building in Beaumont, the business in the main headquarters being handled by a force of about 25 people.

Investigate Oil Mining in Oklahoma

Tulsa.—Preliminary investigation on mining methods were getting under way late last week by representatives of the Carter Oil Company and Miller D. Hay, chief mining inspector of Oklahoma for the purpose of figuring possibilities of mining oil in Oklahoma. This is the first step made toward working out plans for mining oil in the Mid-Continent territory since the Standard Oil Company of New Jersey purchased the patent on the Ranney oil mining system.

Oklahoma offers a broad field for oil mining methods, chiefly in the Nowata district where the Burgess and Bartlesville sands produce from depths ranging from 200 to 1500 feet. Any plans for mining being made now would no doubt be of an experimental nature, working toward perfection of methods for a time when demand for additional crude would justify such methods of recovery.

YOUNT-LEE OIL COMPANY PRODUCTION

Showing recovery during 18 months following opening of new Spindle Top field, according to Texas Quarterly Production reports. Brought up to the present date, the total would be approximately 27,000,000 barrels, including about 25,000,000 barrels from Spindle Top and the remainder from other Coastal fields.

	Barrels	Value
Third Quarter, 1926	3,145,052	$4,586,904
Fourth Quarter, 1926	3,946,246	6,105,295
First Quarter, 1927	4,169,962	6,445,241
Second Quarter, 1927	3,411,161	4,231,431
Third Quarter, 1927	3,776,083	4,669,262
Fourth Quarter, 1927	3,363,020	4,144,811
Total, July 1, 1926, to Dec. 31, 1927	21,811,524	$30,182,944

Trinity at Cotton Valley Still Has Operators Guessing

SHREVEPORT, La.—A test of the Louisiana Oil Refining Corporation's Davis 1, in Section 23-21-10, Webster Parish, Cotton Valley field, reveals that the possibilities of that area are, as yet problematical. This well, tested in the recently discovered Trinity producing horizon during the week, at a depth of 35 feet deeper than the discovery well of the Ohio Oil Company, produced only gas, with no sign of the light oil production that was yielded by the discovery well. That this territory will be equally as treacherous as the recently prospected Trinity area in the Pine Island field is further proven by tests completed previous to the Louisiana's Davis well.

The Ohio Oil Company's Bodcaw 38 oil producer was brought in at 4683 feet, total depth, which is approximately 4490 feet sub-sea level depth; and the same company's Crichton gas well, located in Section 21-21-10, about one mile southwest of the Bodcaw well, was completed at 4672 feet, or 4451 feet below sea level. This well had an initial production of 54 million cubic feet of gas, very rich in gasoline content, although it did not produce any of the light oil as did the Bodcaw well, in Section 15-21-10, which was completed with an initial production of around 6000 barrels of 50 gravity oil daily. The next well to be drilled down to this depth was the Magnolia Petroleum Company's D. G. Cox 1, in Section 22-21-10, approximately one-half mile southeast, which tested salt water at 4752 feet, 59 feet deeper on the surface than the Ohio's Bodcaw well and 98 feet deeper than the same company's Crichton gas well. Now comes the Louisiana's Davis well which was drilled to 4700 feet, and completed with an initial production of about 16 million cubic feet of gas, having a gasoline content of around 1.7 gallons per thousand cubic feet. This well originally completed at 4271 feet, as a six million foot gasser, is located about one and one-quarter miles east and south of the Ohio's Bodcaw 38.

If an opinion may be based upon the wells that have been drilled in the field to date, all of which have been drilled in a south direction from the deepest producing discovery wells, it would be that the area will be considerably spotted, or eratic, as was the Trinity production recently developed in the Pine Island field. No wells have yet been tested in a north direction from the deeper producing wells in this field, although several are now nearing the top of the producing horizon. The Humble Oil & Refining Company is drilling below the final string of casing in its Webb 2, in the center of the northwest of the southwest of Section 14, one-half mile northwest of the Ohio's Bodcaw 38, which will be the first to be tested in a north direction since the discovery of the deeper producing sand. Several wells are nearing the sand in the opposite direction, among them being the Ohio Oil Company's Holloway 3, Section 23-21-10, which was tested as a four million cubic foot gas well at 4411 feet, and will probably be deepened. The Magnolia Petroleum Company is drilling at 4349 feet in Mixon 1, Section 22-21-10, an offset to the Ohio's Crichton 2, after having encountered a serious sidetracking job at this depth. The Louisiana Oil Refining Corporation has set eight-inch in its Lindsay and Crichton wells, located midway between the Magnolia's Mixon and the Ohio's Bodcaw 38, and both of these will be tested shortly.

Only two wells have been drilled into salt water in the field since the discovery of oil production, which is very encouraging. The first well to test salt water was that of the Woodley Petroleum Company, in its Cox B-1 well, in Section 23-21-10, about one and one-half miles southeast of the Ohio's wells. This well was drilled to 4737 feet, at which point it tested salt water with a show of high gravity oil. The second well to encounter salt water was the Magnolia Petroleum Company's Cox 1, drilled to 4752 feet.

Drilling operations are going ahead at full speed in the field.

The first salt water to be encountered in the new deep sand in the Rainbow City area, of Union County, Arkansas, was tested during the week when the Lion Oil Refining Company's Rowland 1, Section 15-17-14, was bailed at 3208 feet, and yielded approximately 1000 barrels of fluid, only five per cent of which was oil. It is believed that the water is coming from above the casing seat. Arrangements have been made to set a string of four and one-half inch casing from the bottom of the hole in an effort to case off the salt water.

Amarillo Preparing for Big Meet of National Oil Scouts

AMARILLO, TEXAS.—Specially prepared papers dealing with the historical and statistical data on all the important oil fields in the Southwest will be given at the business sessions of the fifth annual convention of the National Oil Scouts' Association of America when members meet here May 21 and 22. Arrangements have been completed to accommodate a record attendance of scouts from the Southwest, and leading business men of Amarillo have co-operated in preparing a program of entertainment that promises to eclipse that enjoyed by the scouts at previous conventions.

Papers prepared by the scouts will occupy a prominent position on the business programs, and the association has had these printed in book form to be given out to paidup members, while others may procure copies after the meeting at a nominal cost to cover the cost of printing. The preparation of papers covering information on the larger fields was given for the first time last year, and many requests for copies were made.

San Angelo is putting forward a strong bid for the next meeting, and has arranged for a big turnout of West Texas district scouts, while a large number of scouts from New Mexico will be on hand for the first time, since Amarillo can be reached by auto from the above two active districts.

The opening business session is scheduled for Monday morning in the Herring Hotel, which has been officially designated as convention headquarters, and an address of welcome will be given by Mayor Lee Bivins. W. B. Sutton, Houston, general manager for the Vacuum Oil Company of Texas, is also listed on the program for a talk. The reading of papers will take place at both the morning and afternoon session Monday, with a stag banquet in the evening. Stacey Dorn, San Angelo geologist, has been obtained to give his rendition on the "Home Life and Habits of the Oolites," as part of the entertainment on this event. The election of officers will be held Tuesday morning, and after disposal of all business matters, the members will be provided with transportation to the Sloan Kritser Ranch, where a stag barbecue and outdoor entertainment will be available in liberal quantities. A ball at the Amarillo Country Club will be given as the closing event Tuesday night.

Arrangements have been made to entertain visiting ladies during the convention, and the scouts have been invited to bring their wives along.

The present officers of the association are: W. N. O'Roark, Shreveport, Standard Oil Company of Louisiana, president; John G. (Jack) Pew, Dallas, Sun Oil Company, and E. B. Dilley, San Angelo, Atlantic Oil Producing Company, vice-presidents; John H. Langston, Dallas, Sun Oil Company, secretary-treasurer, and Ford Turner, San Angelo, Pure Oil Company, chairman of the executive committee.

Daily Average Greater During April Than March

(*Continued from page 38*)

lowed the completion of wells by the Pure Oil Company and Magnolia, in Sections 10 and 11 of Township 17, Range 14. The bulk of the acreage in this area is held by the Magnolia, Ohio, and Pure, but is checker-boarded somewhat by smaller concerns and individuals. Fifteen tests are now drilling in this district.

Wildcatting in Louisiana Gulf Coast continues over a widespread area, but no outstanding developments have resulted since the discovery of production at Bayou Boullion, St. Martins Parish, by the Rycade, in March.

Oklahoma

Throughout April a decline in activity was evident in Oklahoma and Kansas, but this lull has not become apparent in statistical columns as is seen by an increase in the number of completions in both states when compared with March. However, this increase resulted from the fact that a large number of wells were nearing completion depths in March and the finishing of numerous jobs was effected early in April. But due to a heavy decline in the number of new holes started within the past three months the brunt of the loss in activity should be brought to light in May and June.

At this time there remains one big possibility of a comeback in Oklahoma activity. This prospect lies in the power of operators to hold down drilling the South Little River region. Discoveries late in April and early in May have opened the way for as many as 200 outstanding locations. The bulk of these are believed to be good for big production. Thus if the proration committee is not capable through reasonal procedure to restrain drilling in this territory, Oklahoma is hardly due for less drilling; certainly not less new crude brought to the surface. For, if this territory is turned open for unrestricted development, it may overbalance the decline in the remainder of the State's operations.

Kansas

Kansas practically held its own during April in drilling activity. General losses over the State were pretty well offset by the rush of new drilling in the Lost Springs field, Marion County. Work was showing a comparative decline though at the opening of May, and the peak of activity is regarded as past. Oxford field is showing a slackening of drilling following the development of the south end's big production, and the decline there will mean the riddance of the State's most centralized play.

The fact that conservation is resulting in a curtailment of wildcatting, except where lease expiration hastens drilling, will mean a considerable general slump within the next few months. The majority of Kansas and Oklahoma operators have pledged themselves to drill no "unnecessary" wells until a stronger market warrants such a move.

While more completions were registered in both states last month, there is a sharp decline in initial production recovered in Oklahoma and less than 3000 barrels increase in Kansas. Much of this results from smaller wells in the Seminole fields proper, where small wells were growing to be common until the discoveries south of Little River started.

During April there were 298 locations completed in Oklahoma as compared with 343 in March, 130 oil wells against 176, 49 gas wells against 55, and 119 failures against 112. On the other hand there was only 33,370 barrels initial production in April against 62,544 barrels for the previous month. In Kansas there were 93 completions against 109, including respectively 45 oil wells against 53, seven gas wells against 13 in March and 41 failures against 43 in March, while initial yield from oil wells totaled 17,143 barrels as compared with 14,543 barrels in March.

California

Completion of a 1000-barrel well in the Potrero field was the outstanding achievement of the month in California. With the well the cloud of doubt which has been hovering over the area for more than a year has been removed, and regardless of the future action on the test it has already broken all California records by producing a 48 gravity oil at the rate of 1000 barrels per day. Potrero lies between the Baldwin Hills and Rosecrans fields and is the last connecting link between the old Beverly Hills and Newport fields. Long Beach, Huntington Beach, Seal Beach and Dominguez are also located along the same line of structures. The Potrero field probably will not be a large one, as far as acreage is concerned, and will be controlled chiefly by the Associated if it assumes the southeast-northwest position common to every other field along the same fault line.

The Long Beach field climbed steadily during April and at the end of the month was producing 175,000 barrels. Production is already above the limit set six months ago by conservative operators and it now appears that the peak will be well above 200,000 barrels. About 75 wells have been completed in the deep zone and nearly 200 are still drilling for the lower levels. The tendency to complete wells around the 6500-foot mark has resulted in a larger initial production and means a steadier and more sustained yield. The failure of the wells to decline rapidly during the month was a distinct surprise and the new producers had little trouble in pushing production upward week after week. The Shell Company completed Martin 4 at 7060 feet, giving the well the distinction of being the first completion below 7000 feet. Initial production was about 1800 barrels. Richfield drilled Denni 6 below 7400 feet and is completing the well. The remarkable fact about both wells was that neither succeeded in drilling entirely through the oil zone. Both wells passed through nearly 5000 feet of oil sand and shale, although only about 2000 feet is being utilized.

The new Ricon field had its usual hectic month. The area looked both good and bad at intervals but failed to give an idea of what may be expected of it. Pan American's deep test was a disappointment when put on production below 3900 feet. The well showed little inclination to flow and produced only 100 barrels on the pump.

New A. P. I. Posters Now Ready for Distribution

New York.—Following the decision reached at the Chicago meeting, last December, a number of posters have been prepared by the American Petroleum Institute, illustrating or emphasizing the salient points of the A. P. I. Codes on the care and use of equipment in the field. The work has as its object a direct presentation of the recommended methods in the proper care and use of oil field material to field men, superintendents, drillers and all others connected with the handling of equipment.

Poster No. 1, illustrating the scope of A. P. I. standardization programs, has been circulated widely throughout the industry, and there are now ready four others, as follows: No. 2, on belting, its care and use in the field, size nine by 12 inches; No. 3, wire rope, care and use in the field, size 17 by 23 inches; No. 4, A. P. I. standard groove forms for wire rope and Manila cordage, size nine by 12 inches; No. 5, Manila cordage, care and use in the field, size nine by 12 inches.

These posters are printed on 150-pound all-jute paper suitable for tacking on warehouse walls, in bunkhouses, machine shops, etc.

Prices are as follows: Posters numbers two, four and five in size nine by 12 inches, quantities of from one to 24, $2.00 minimum charge; poster No. 3, size 17 by 23 inches, one to 24, $3.75 minimum charge; 25 to 99 in size nine by 12, .08 cents each; size 17 by 24 inches, 15 cents each; 100 to 499, size nine by 12, numbers two, four and five, .05 each; No. 3, size 17 by 23, .10 each; 500 to 1000, numbers two, four and five, size nine by 12, .03 each; No. 3, size 17 by 23, .08 each.

Company name and "Instructions" at the bottom, three lines maximum, $1.00 in addition to the prices above, for any quantity of each of the four posters ordered at one time for one company name.

Mountain States Field Development Notes

Contracts Let for La-Barge Line Construction

Kemmerer, Wyo.—Contracts for the construction of the pipe line from the LaBarge field to railhead at Opal, on the Oregon Short Line Railway, have been let by Midwest Refining Company to White Motor Truck Company, the Gordon Construction Company and Colby & Rognstad. At present the company is constructing the telephone line along the right-of-way.

Weather conditions for the southwestern part of the State are ideal and road conditions have improved materially. This is permitting the resumption of operations in the district which have been shut down during the winter months.

Operations at the California Petroleum Corporation's big camp are still suspended. At the present time officers of the Texas Production Company and officers of the Calpet are together supervising an inventory being taken of the Calpet properties in the field. Upon the completion of this and other formalities it is presumed that the properties will go under the supervision of the Texas Production Company.

Ohio Enters Pondera

Great Falls, Mont.—Ohio Oil Company is the third major operating company to evince its interest in the Pondera field in the Sweet Grass Arch territory. Company last week purchased a 120-acre tract from Genou Oil & Gas Company. Land involved is the west half of the southeast of section 7-27-4w, and the southeast of the northwest of section 18-27-4w, approximately one mile northwest of Montana Pacific Oil Company discovery. Previous to the entrance of the Ohio into the field the Texas Pacific Coal & Oil Company and the California Petroleum Corporation had purchased acreage in the field.

The J. W. Elliott well, three-fourths of a mile northwest of the discovery, was completed Monday as a small producer with prospects that upon being pumped its production will increase. The hole is bottomed at 2037 feet and the production at present is about 10 barrels.

Bannatyne Field

Great Falls, Mont.—Southeastern extremity of the Bannatyne field has been established definitely by the completion of the Fulton Petroleum Company's Tibbets 1, which was completed as a dry hole. Location is in the northeast of section 8-25-1e, three-quarters of a mile east of Genou Oil Company's discovery well. Showings of free oil were encountered in the top of the Emerick sand, but not in commercial quantities. Operators state that the result of the Fulton well is further confirmation of the theory that the Bannatyne structure rises to the north from the line of wells which are now producing along the line between sections 5 and 6.

Completion of the Hardrock Oil Company well on the structure has been delayed by the nitroglycerine explosion at the test two weeks ago, and by having subsequently had to rig up the drilling machine it will be necessary to complete the job of shooting the well before it can be put on production.

Great Falls, Mont.—Feasibility of extending its line from Agawam into the Pondera field is being considered by the Chicago, Milwaukee & St. Paul Railroad. The field is about seven and one-half miles northeast of Agawam on an almost direct line from Agawam to Conrad. The new road would not only serve the oil district, but would provide an outlet for the big wheat country northwest of the field.

The Bowdoin structure, in Phillips County, will be traversed from southeast of northwest this summer by a branch line of the Great Northern Railroad, which will construct a road from Saco to Hogeland in Blaine County. It will pass through the present camp of the Big Dome Oil Company.

Great Falls, Mont.—Several jobs of oil well shooting in Northern Montana fields which have turned into tragedies for not only the shooters but members of the drilling crew, have been responsible for a unique strike which has been instigated among drillers and tool dressers. They have decided that from henceforth under circumstances will they assist in the shooting of a well; they will leave that to employes of the torpedo companies entirely and they will be far, far from the scene when the shooting takes place. Heretofore one man from the torpedo company has been assisted by one man from the drilling crew.

Pendroy Structure

Great Falls, Mont.—There has been considerable interest manifest recently in the two successive and considerable showings in the Continental Development Company's wells on Pendroy structure. The first sand was found at 2550-33 feet, and the second at 2576 feet, in the top of the Madison limestone. The second flow has so substantially increased the flow from the well that it is believed that a commercial producer will be completed upon drilling in. The well is in section 8-27-5w, approximately in the center of a large area around which the rim of six or seven wells have been drilled in the last six years. In nearly all of the previous wells oil has been found, but with the exception of the producers at Pondera none has equaled the indications of the Continental well.

Oregon Basin

Cody, Wyo.—No new completions are reported in the Oregon Basin field for the week. The deepest commercial well in the field, that of Western Oil Company (formerly Ferdig-Wyoming Oil Company), has suspended drilling at 3880 feet in 19-51-100 and is waiting on orders. Disposal of this company's production is presenting a difficult problem.

Refinery talk continues apace. The Paul Huber interests of Casper and Denver have a site for a plant in Cody, but whether or not it will be built is not decided. Mr. Huber visited the field this week and stated that if a satisfactory market for fuel oil could be arranged, the skimming plant would be built immediately.

To test out the theory that there is a third "high" in the field in the locality of what is known as the Garner permit in the western part of the field, interests headed by D. L. Miller will drill a deep test in section 27-51-101, which is west of the Garner permit. At the same time the Cody Petroleum Company has moved its rig from Garner 1, in section 28-51-101, to section 22-51-101, and will drill Garner 1A there.

Four miles north of the discovery well the J. W. Bales interests are cementing casing at 1267 feet in their well on section 20-52-100. This well had a flow of 10,000,000 feet of gas in the Frontier at 1305 feet, and in one of the upper Wall Creek sands it had a considerable showing of light green oil.

Midwest Locations

Casper, Wyo. — Midwest Exploration Company has announced the spotting of two interesting wildcat locations, one in Colorado and one in New Mexico.

Company will test the Bell Rock dome in Moffat County, Northwestern Colorado, some 14 miles north of the Iles field, and six miles south of Craig. The well will be a test of the Mesaverde and the Morapos sandstone. Total depth will probably be about 3500 feet.

In New Mexico the Stony Butte structure on the Navajo Indian reservation, located on unsurveyed land, is scheduled for a test.

Move to Fort Worth

Fort Worth, Texas. — Operating headquarters of the Weekly Oil Corporation and the Church & Fields Interests have been moved from Odessa to Fort Worth, and offices established on the 14th floor Fort Worth National Bank building. Bert F. Weekly is president of the former concern, and also head of the drilling contracting firm of Shira & Davidson, which is now making headquarters at Fort Worth.

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Say you saw it in The OIL WEEKLY

Start Second Sulphur Mountain Test

Ventura, Calif.—Encouraged by the success of the first well, Bradford and Geis have started a second test on Section 22-4-22, in the Sulphur Mountain district. The first completion, which might be termed the discovery well, has produced a large quantity of oil on a series of long tests during the past six months. The well was the first to find a deep producing formation in the area and is pumping from about 500 feet of oil sand below 1875 feet. Shallow oil has been produced nearby for several years. The oil from the deeper sand is about 19 gravity and contains a good percentage of gasoline. The Continental Oil Company has started a well on Section 21-4-22, with the same formation as its objective.

Ventura, Calif.—The Scott Petroleum Company, after a series of tests below 4000 feet, is deepening its well on section 35-4-25, a short distance from the Rincon field. Good oil showings were found in a large body of sand, but tests showed the formation void of commercial possibilities. The well is now drilling at 4280 feet in a gray sand. Thin streaks of oil-bearing sand have been found since drilling was resumed.

Bakersfield, Calif.—The Edison district, which showed much promise last fall, has assumed a more doubtful role, following failure of the General Petroleum Corporation's Kerwin 1, Section 5-30-29, to encounter another definite body of sand between 4000 and 5175 feet. The well produced oil and water several months ago from the former depth but fell short of commercial production. Another thousand feet has accomplished little. The Midway Northern Oil Company has drilled through several feet of sand and shale which showed some oil in Brown 1, Section 29-29-30. The Edison area is southeast of the Kern River field and a few miles south of the Round Mountain field.

Washington. — The government of Afghanistan has granted oil and mineral concessions to American interests, according to an oral statement from the Department of State.

West Texas Production

WINKLER COUNTY

	Producing Wells	Daily Average Prod.
Hendrick Field—		
Roxana Petroleum Corporation	20	*17,800
Cranfill & Reynolds, Inc., et al	4	*17,780
Humble Oil & Refining Company	16	*15,485
Gulf Production Company	13	*14,410
Republic Production Company	5	*14,215
Atlantic Oil Producing Company	16	*15,550
Southern Crude-Dixie Oil Company	15	*11,180
Atlantic & Collett-O'Keefe	3	*11,055
Southern Crude-R. A. Westbrook	14	*10,930
Pure Oil Company	11	*9,495
Independent Oil & Gas Company	15	*7,315
Landreth Prod. Corp. & Roxana	8	*4,650
The California Company	8	*3,315
Texon Oil & Land Company	4	*3,165
Marland Production Company	2	*2,015
Magnolia Petroleum Company	6	*1,835
Murchison & Cranfill Bros. Oil Co.	5	815
Llano Oil Co. & Roxana Pet. Corp.	2	40
Totals	167	159,050

CRANE COUNTY

Church & Fields—		
Simms Oil Co. & Atlantic Oil Prod. Co.	31	7,560
Landreth Production Corporation	16	7,350
Prairie Oil & Gas Company	12	7,180
Warner-Quinlan Co. of Texas	27	6,615
Tidal Oil Co. & Turman-Maxwell	25	4,535
Humble Oil & Refining Co.	13	3,785
Magnolia Petroleum Company	33	3,405
Gulf Production Company	11	1,650
Independent Oil & Gas Company	7	1,580
The Texas Company	2	200
Church-Fields-Weekly	2	90
Stidham & Thrasher	1	...
Totals	179	43,950
Gulf-McElroy		
Gulf Production Company	60	15,270
Gulf-Waddell—		
Gulf Production Company	1	15
Marland-Hughes—		
Marland Production Company	14	390
The Texas Company	9	135
McMan Oil & Gas Company	2	60
Totals	25	585
Totals for Crane County	265	59,820

REAGAN COUNTY

	Producing Wells	Daily Average Prod.
Big Lake Field——		
Big Lake Oil Company	128	14,120
Texon Oil & Land Company	79	4,330
Skelly Oil Company et al	1	40
Totals	208	18,490

PECOS COUNTY

Yates Field—		
Mid-Kansas-Transcontinental Oil Co.	68	*16,610
The California Company	29	*7,780
Gulf Production Company	17	*5,975
Gulf Prod. Co. (Crockett Co.)	3	275
Roxana Petroleum Corporation	12	*4,700
McMan O&G. Co. & Marland Prod. Co.	16	*3,810
Humble Oil & Refining Company	11	*3,550
Sims Oil Company	6	*3,025
McMan Oil & Gas Company	4	*1,225
Marland Production Co.	10	*995
Operators Oil Trust, Inc. (A. T. Herd)	7	*880
Red Bank Oil Company	2	515
Madza Oil Corp. & Savoy Oil Co.	1	295
Grayburg Oil Co. & T. T. Word	3	*250
Kirby Pet. Co. & Edson Pet. Co.	1	145
Skelly Oil Company	1	120
Phillips Petroleum Co.	1	100
Kirby Petroleum Co.	1	80
Totals	191	50,330

MISCELLANEOUS

Upton County	284	12,610
Howard County	147	*4,175
Mitchell County	140	3,040
Crockett County	35	1,960
Jones County	24	1,325
Fisher County	2	215
Runnels County	2	130
Loving County	2	115
Scurry County	5	40
Ector County	1	15
Totals	642	23,625
Totals for all fields	1473	311,315
Totals previous week	1463	408,170

*Production partially pinched.

Actual Records Prove Super-Economy of
DUNN SAFETY ROTARY TONGS
The exceptional economy of Dunn Safety Rotary Tongs is being demonstrated daily in all fields.
In Oklahoma, one company drilled 3800 feet of hole before changing the first die. The other die still was in good condition.
A user in California drilled four weeks (down 5000 feet) with one set of dies which still were in excellent condition, and were expected to go another thousand feet before changing.
Records of another user showed the upkeep of Dunn Safety Rotary Tongs to be 85% less than the cost of maintaining other makes of tongs used.
One company reports that 15 Dunn dies outwear 100 dies of other makes. And still another company advises that one month's upkeep of ordinary tongs will operate and maintain Dunn Tongs for a period of nineteen months.
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Trace Teapot Drainage With Dyes in Underground Water

IN order to trace the flowage of oil and water through the sands from the Teapot Dome to the Salt Creek field, in Wyoming, F. B. Taylor, the State oil and gas inspector of Wyoming, recently concluded an interesting experiment with oil field dyes. He placed dyes in wells offsetting the wells on Salt Creek leases and from observation concluded that water from the Teapot Dome is flowing through the structure to the Salt Creek field and that the oil content of Teapot Dome is also passing from Teapot Dome to the Salt Creek field.

Between January 28 and March 31, this year, dyes were placed in 13 wells. Dyes used included: croceine orange, Victoria green, chysoidine, croccine orange, safranine, safranino, fluoresceine, methyl blue, methyl orange. In all but four wells, four ounces of the dye was used; in the four which used fluoresceine, one pound was used. The dye was put into the wells in cartridges.

Three companies have producing wells adjoining the Teapot Dome on the north and northwest; these companies are the Ohio Oil Company, the Prairie Oil & Gas Company, and the Argo Oil Company.

The dyes used were especially suitable for this type of work. Some of them require special treatment while others are detected even in minute quantities by the eye.

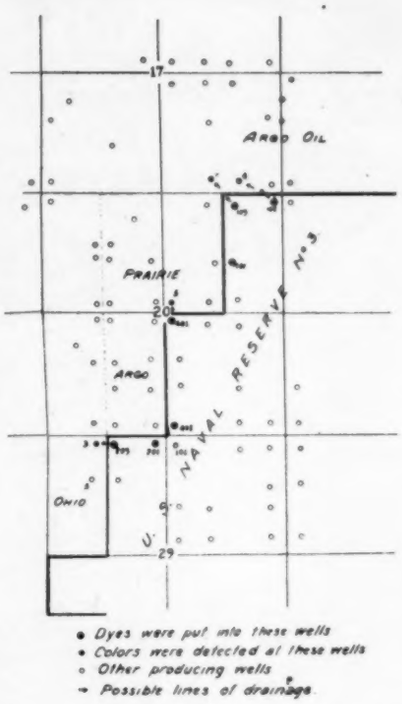
Methyl orange and croceine orange show an almost imperceptible orange color in alkaline water; by acidulating such water these colors change from orange to a distinct pink or red. Muriatic acid was used in the water samples from wells where methyl orange and croceine orange were used across the line on Teapot Dome.

In testing the majority of the dyes where the examination was with the naked eye, a glass tube about two feet long was used. The observation was made through this tube with light entering the column of water in such a manner that no refraction took place.

It has been found from previous experience that about two ounces of dye would show over the distances to be traveled under the surface between wells on each side of the Teapot Dome boundary. To make the test positive, the quantity of dye was doubled, and also increased to one pound in the last test.

The cartridges were so manufactured that they would pass through a column of oil without the oil having any effect upon the contents, but immediately upon coming in contact with water, the contained chemicals would evolve a gas that would in turn distribute the dye content throughout the column of water in the well.

As it is considered that there is a movement of water from the north end of Teapot Dome to the south end of Salt Creek, it was expected that the dye would become noticeable in wells in the Salt Creek field.



The geological conditions over that part of the Teapot Dome and the south end of the Salt Creek field generally referred to as the Saddle, present a faulted area with two producing horizons in the Frontier Sand formation and the second and third Wall Creek sands. Since all the wells on the Teapot boundary, on the Mammoth Oil Company's or the Naval Reserve's side are producing or open to the second Wall Creek sand only, samples of water from wells on the Salt Creek side from wells producing or open to the third Wall Creek sand were not expected to show any presence of dye.

The second Wall Creek sand carries but a very small quantity of water in this area and such water content is mainly held in solution in the oil in this sand. For this reason samples of water are rather hard to obtain from the second Wall Creek horizon, but with the assistance of field men, samples were secured.

According to the report, the diffusion of the dye appeared very great and the permeation through large quantities of water diluted the dyes down to the vanishing point in the samples placed in the four-ounce cartridges, but dye colorings were found in waters from several wells, with their characteristic coloring.

In samples of water taken from the Ohio Oil Company's Well No. 3, on section 29-39-78, one sample showed methyl orange. This dye was placed in Teapot Dome well No. 203.

In samples of water taken from wells Nos. 4 and 5 on section 17-39-78, fluoresceine was determined.

In a sample of water taken from a tank on the east half of the southwest section 20-39-78, a very light coloring after filtering was discernible in the glass tube. This was supposed to be fluoresceine, but the quantity was insufficient to make a certain statement possible.

In a sample of water secured from wells Nos. 4 and 5 on section 17-39-78, fluoresceine was very noticeable, giving a distinct and characteristic green tinge.

In a sample of water obtained from well No. 5, on the Bywater lease of the Prairie Oil & Gas Company, a fluorescent color was noticeable, but this was quite dim. Inasmuch as this well is producing from the third Wall Creek sand, it was considered that a showing of any color indicated the infiltration from the second to the third Wall Creek sand.

Analyses of Many Crudes In Government Report

The results of analyses of more than 300 representative crude petroleums of the United States are given in Bulletin 291, recently published by the United States Bureau of Mines, Department of Commerce.

Petroleum samples from Alaska, Arkansas, California, Colorado, Illinois, Indiana, Kansas, Kentucky, Louisiana, Montana, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, Texas, Utah, West Virginia and Wyoming, are discussed in the report.

In its study of the typical crude oils, the Bureau of Mines had to develop laboratory methods to collect and analyze several hundred samples of oil, and to work out systems of classification and comparison, so that the laboratory results would be more generally useful.

The method of analysis adopted by the bureau, including the modified Hempel-type apparatus and accessories, involves the distillation of a sample of crude oil under carefully controlled conditions that can be duplicated readily and the subsequent examination of the series of successive fractions thus obtained. In addition, the gravity, color, viscosity, pour point, and the sulphur content of the crude itself are determined.

Copies of the bulletin, No. 291, "Tabulated Analyses of Representative Crude Petroleums of the United States," may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., price 15 cents.

Heaters Increase Runs

Casper, Wyo.—Installation of four Griscom-Russell pipe line heaters has been responsible for an increased run from the Poison Spider field to Casper. The Fargo-Western Oil Company had previously been running about 250 barrels of oil per day, but is now running 1420 barrels. The company has about 100,000 barrels in storage which will be marketed during the summer, in addition to the regular daily production from the field.

Economic Effect of Use of Gas in Oil Recovery

Paper read before the Natural Gas Division of the American Gas Association, Dallas Convention, May 8, 1928

By E. O. BENNETT
Chief Petroleum Engineer, Marland Production Company

DURING the early days in the oil industry natural gas, especially that accompanying oil produced, was considered of little or no value and was looked upon as a necessary evil to be gotten out of the way as soon as possible.

Today the efficient oil producer recognizes gas as the all important agent in helping him get his share of oil contained in a subsurface structure into which he may drill.

The natural gas industry is interested in gas as a commodity for the energy it can liberate as heat when burned in a proper manner. The oil operator is interested in this same gas, before it reaches gas distribution systems, not for its calorific value but for the potential energy it contains due to the pressure at which it exists and due to its effect upon the migration of oil through porous sand bodies.

Gas referred to in this paper is that in contact or associated with oil and not that in isolated gas sands. It is principally casinghead and residue gas.

Between the oil producer and the natural gas consumer there is the natural gas gasoline manufacturer who is interested in the gas from another view point; that of extracting the condensible vapors carried by the gas, in the form of gasoline.

In most cases natural gas associated with oil can be made to do much more work before it leaves the oil property, never to be returned, than it has been called upon to do in the past.

It has been proven conclusively, by numerous experiments and tests, that natural gas dissolved in oil keeps the oil in condition such that its fluidity is greater and its viscosity less. At the same time this is accomplished the gravity of the oil is increased.

The resistance to flow of oil through a sand is governed largely by the viscosity of the oil and its surface tension, both of which are affected by the amount of gas kept in solution in the oil. The viscosity is reduced with increased saturation while the surface tension is increased.

Another very important factor concerning the flow of oil through a porous medium is the blocking of pore space with gas which comes from the oil. This is called the Jamin effect, after its discoverer. It is definitely known that if certain rates of flow are exceeded, gas in solution will leave the oil and will occupy the pore space making the flow of oil very difficult. This effect is very serious and can only be controlled by proper pressure differential across the sand through which it is moving. The differential can be controlled by proper back pressure regulation.

The amount of gas which can be dissolved in any oil is governed mainly by the composition of both the gas and the oil, also by the temperature and pressure conditions existing. The rate at which gas will dissolve in oil under the above conditions is a function of time and the amount of agitation occurring. If the gas and oil are violently agitated so as to bring the entire volume of each into intimate contact, saturation will take place in a very short time. This can be readily demonstrated in the laboratory and would tend to make one very enthusiastic over the use of gas for oil recovery, especially as applied to properties where the original gas contained has been exhausted.

Unfortunately it is practically a physical impossibility to replace gas in solution in the oil remaining in a subsurface structure as no agitation can be made to take place. The gas will go into solution without agitation if permitted to remain in contact long enough. The rate, however, is very slow and the time required makes it economically impractical to try to change the character of the oil by saturating it with gas while it is in the sand.

The above actions, however, indicate what may be done to derive the greatest ultimate yield of oil from a given pool and can be stated—"Keep all gas originally in solution, in the oil as long as possible permitting the least amount to escape and when any does escape make it do its maximum amount of work in moving oil to the well."

To accomplish this may mean a decrease in the rate at which oil should be produced from a given structure with a consequent decrease in the amount of gas accompanying the oil and in most all cases with less gas per barrel of oil produced. When this is done a part of the gas which would ordinarily be produced with each barrel of oil is left in the formation to help remove other barrels of oil.

Controlling oil production so that maximum efficiency, regarding gas dissipation is reached, will have a decided effect upon the natural gas merchant and the gasoline manufacturer. Instead of having to install equipment to take care of large volumes during the early life of a field and very small amounts later, they can each put in average capacity equipment with assurance of longer life in production. This will yield much greater returns on the initial investment with a stable source of supply to meet market conditions over a longer period. A uniform rate of production will also have a tendency to stabilize the price of the products. A great amount of attention has been given to increasing the recovery from old depleted properties by the injection of gas and air for oil recovery purposes while but little thought has been given to maintaining during flush production the most favorable conditions for ultimate recovery.

Maintaining Pressure on Flush Production

Results obtained during the past few years have proven beyond any doubt that for greatest ultimate recovery there is a best rate of production from each and every well. This rate is the one which will yield the greatest amount of oil with the least amount of gas from the oil bearing formation.

The minimum amount of gas that can be produced with each barrel of oil is governed by natural conditions existing and may vary considerably from place to place.

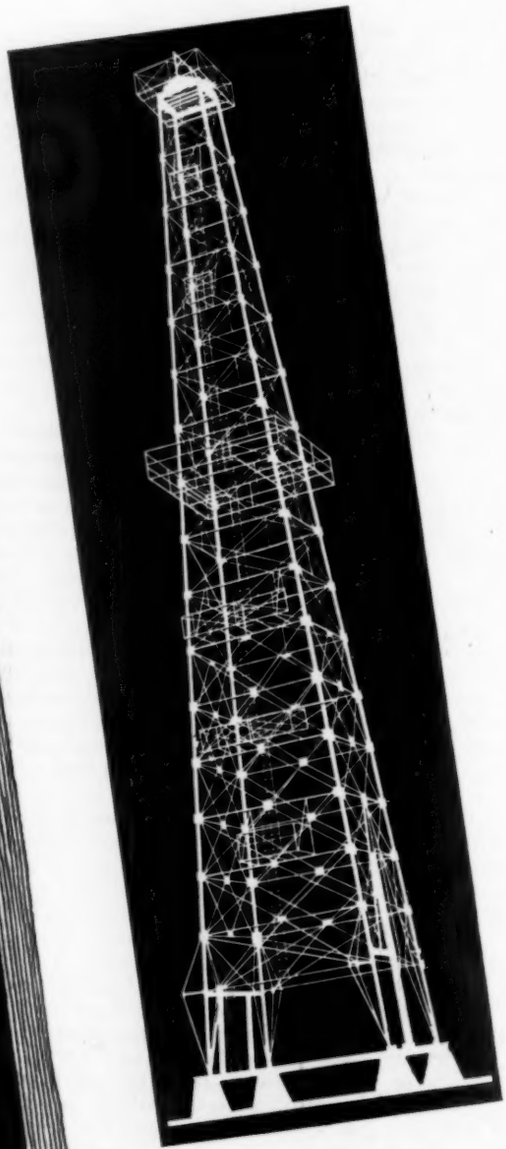
Measure of Efficiency

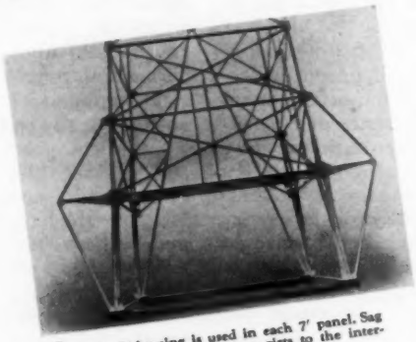
The most economical production of both oil and gas will be obtained when the amount of gas produced approximates that originally in solution in the oil reservoir which was drilled into.

The only way in which the actual amount of gas dissolved in the oil can be determined is to take an actual sample of the mixture as it exists in the bottom of the well. A thiefing device recently has been designed and perfected which permits obtaining a true sample from the bottom or any other point in a well. The same device records the true pressure and temperature existing at the point where the sample is taken.

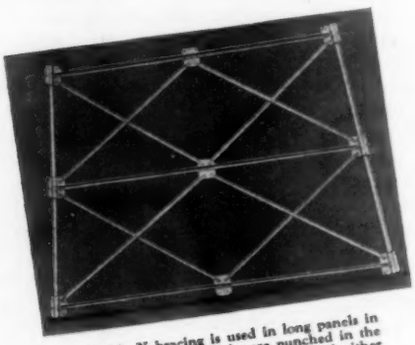
When the sample of oil with its original gas in solution is brought to the surface the amount of gas contained

The NEW Moore





Full X bracing is used in each 7′ panel. Sag rods run from the longer girts to the intersections of braces above.

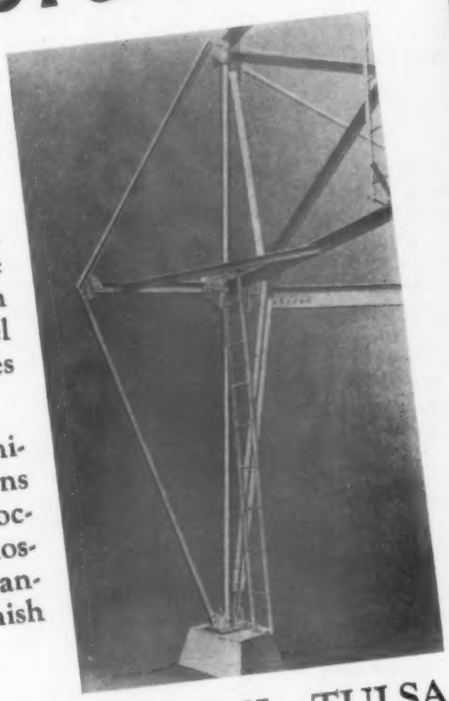


Double X bracing is used in long panels in high derricks. Two holes are punched in the center of braces so they can be used with either end up.

At their intersection, the braces are attached by a bolt and a pipe separator. The braces are thus held together rigidly, and the possibility of rattling is eliminated.

Say you saw it in The OIL WEEKLY

Champion
A SUPER DERRICK
with *super* bracing



The Bracing in the Moore Champion Derrick is of structural steel throughout. Its design gives an exceptionally rigid structure, easily and quickly erected.

A new feature is the outside wing bracing in the first panel. This compensates for the lack of regular type bracing inside, which must be omitted because of the bull wheel or draw works. The wing bracing gives the utmost rigidity to the derrick.

Bracing is furnished galvanized or aluminum painted. (The seamless leg sections are always galvanized.) The hot dip process is used for galvanizing. Where atmospheric conditions do not demand galvanized bracing, the aluminum painted finish gives satisfaction.

Write for Descriptive Bulletin

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in it is drawn off, and metered, after which the volume of oil is measured. The condensible gasoline is also extracted by activated charcoal. These data then afford a means of obtaining the true or formational gas-oil ratio and give an index or a means of determining the best conditions under which the well can be operated. To determine the conditions of the well throughout its life the gas-oil ratio may be compared to that obtained during the early life of the well. It is extremely desirable to determine the first set of measurements as soon after a well has been completed as possible.

Bottom pressures vary widely from those calculated from known well head pressures on account of the variable amounts of gas produced with the oil. If the true amount of gas produced with the oil and the fluid lever are known, bottom pressures can be calculated with a fair degree of accuracy.

Returning Gas to Formation

It has been found in practice that it is impossible to return as much gas to an oil producing stratum as was taken from it unless the original pressure conditions are greatly exceeded. From this fact it can be seen that there is a possibility of retaining pressures existing at or near original values, although large quantities of oil have been removed.

If gas taken from a well producing oil is returned to the sand as soon as possible after a well is drilled in and allowed to produce, there is a good possibility of retaining pressures approximating those originally existing in the area. When natural decline starts under these conditions it will be slower than a normal decline observed in ordinary production practice, all of which will help increase ultimate yield. Since this method of handling production is new and but little data are available, the exact time to start repressuring and the pressures which should be maintained have not yet been determined. Indications are, however, that the earlier repressuring operations are started the greater will be the economic gain. Data observed where early repressuring has been practiced indicate that where the repressuring is started during the first five per cent of the normal life of a field, and carefully carried out, that the production during the next 15 per cent of the normal life of the field will approximately equal that which would ordinarily be produced during the entire life of the field, and that the ultimate production will be from 200 to 300 per cent more than under conditions where gas is not conserved.

Repressuring during the period of production is being carried out with pressures up to 1500 pounds and excellent results are being obtained. One of the greatest benefits of early repressure operations is the retarding of edge water encroachment and holding down bottom water coning, both of which will shorten the life of a producing formation by trapping off oil. Wells making water have been dried up when put under pressure control. If early reinjections of gas is started, oil in the sand will retain the gas it carries in solution for a longer period and will flow more freely through the sand to the well, resulting in a greater ultimate yield. In general it may be stated that the rate of production from an oil producing formation is inversely proportional to the rate at which the pressure in it is dissipated. This, of course, is where existing pressures are due to gas and not occasioned by natural water drives.

If the large volumes of gas produced during the flush life of important pools are used for the purpose of manufacturing gasoline, an over production of this commodity may exist with a resultant low price. In many instances the price is so low and the life of the field so short the initial investment cannot be paid out.

In certain areas it has been shown that the oil producer can earn much greater profits by returning "wet gas" to the producing formation than is possible by selling his gas to gasoline plants and obtaining extra revenue from royalty on the gasoline produced and sold. The value of the "wet gas" recycled through the formation may be as much as 300 per cent. more than the value of his interest in the gasoline it would produce.

When oil has been produced down to the economic limit, gas can then be used for gasoline and upon a continued recycling program more than the usual normal amount of gasoline can be recovered. The gasoline produced will also be more stable and of a better quality. Gasoline plants installed at this time can be properly designed as to size and a minimum amount of equipment used. Plants installed under this program will yield greater returns on capital invested.

Where compressor plants are installed to return gas to the formation in the early life of a field they should be designed so that they can be used in connection with gasoline absorption plants with a minimum change in equipment. After recycling for gasoline extraction the same plants can be used for booster stations to market gas remaining. Vacuum should never be applied to any property until all the oil possible has been removed and it should only be used to produce gas.

Results of tests conducted for the past two years show that gasoline vapors carried by wet gas offer the greatest possible scrubbing action for removing oil from sand grains in a producing formation. With such a scrubbing action greater recoveries will be made and the gasoline used for this purpose will be recovered with the oil as an increase in gravity.

If large quantities of gas associated with oil are sold for industrial purposes during the early life of the field, much of the oil will be robbed of its gas and will consequently be made dormant where it cannot be produced. It is true that the gas thus produced has a definite market value. It will also have the same, or an even greater market value, if it is used first for oil recovery, next for gasoline recovery and finally for industrial consumption as fuel. Gas is always cheapest at the start of a pool, when it is most available. To use it for reinjection at this time is most economical as its cost for this purpose at a later date makes it prohibitive to use.

Nature was kind enough to give us a large amount of potential energy stored up in the gas. To produce this gas without utilizing this energy is to waste a resource that cannot be replaced. This waste will be paid for by leaving oil in the ground that might otherwise be recovered.

Method of Production

Experiments conducted on the best method under which to produce a well show that in order to minimize the gas waste, the oil should not be taken from the well at a rate greater than it can enter the well bore from the formation. To do so will create an oil drained space around the well which will permit gas to escape freely. This gas in escaping will not expend its energy on moving more oil to the hole and will cause a rapid decline in pressure. To prevent the by-passing of gas in a well the formation must be kept saturated with oil at all times. If gas is being returned to the formation under pressure from the surface, it is necessary to prevent it from by-passing or channeling through from well to well. The best method to be followed in doing this depends upon the manner in which the well is being produced. In general, wells may be classed in three groups.

Natural flowing wells.
Artificially flowed wells.
Pumped or swabbed wells.

To obtain the greatest production with the least waste a natural flowing well should not be permitted to flow at a rate which will use gas in abnormal amounts. The best means of controlling such a well is to hold back pressure on the formation which reduces the flowing differential pressure between the well bore and the sand back from the well. This may be accomplished by restricting the flow at the well head with a valve or "bean" or by running in a string of tubing in the well, or both. Better results will generally be obtained if the well is tubed and then controlled with a choke or "bean." Adjustable "flow-beans" have been found most desirable and they are used extensively. It is necessary to test each well in order to determine the most efficient point at which it should be operated. In most cases it will be found that the most efficient rate of flow is not the one which will permit a natural flowing well to produce at its greatest rate.

Where gas is taken from traps, used in connection with natural flowing wells, for gasoline extraction and then sold as residue, a more stable supply will be provided for a longer period when the well is produced under pressure control.

Gas Lift Wells

A well produced by the gas lift can be operated in two ways:

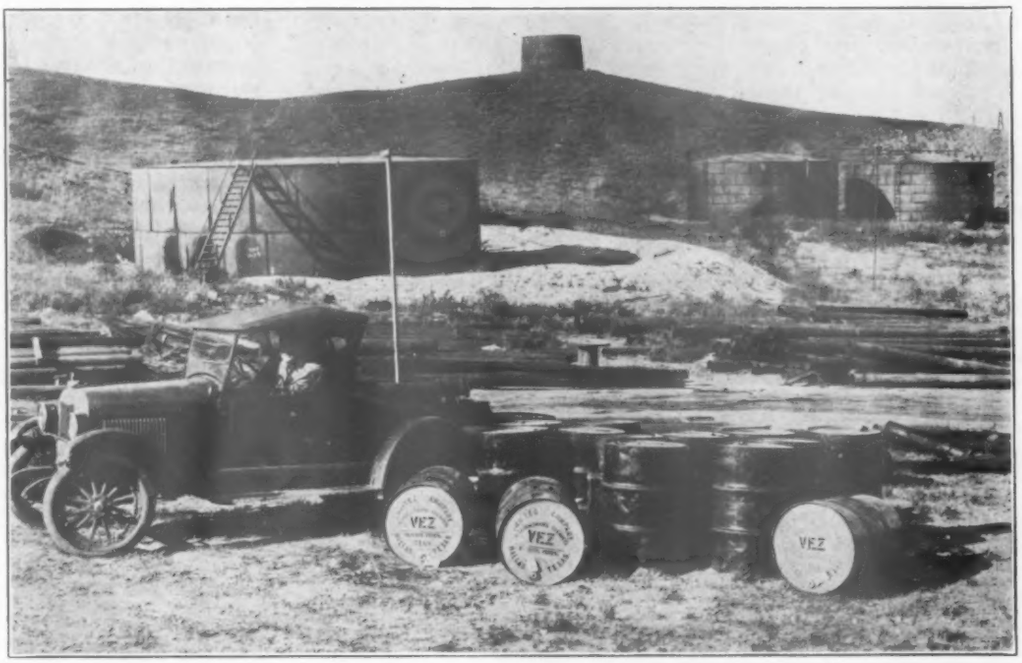
One is to get the most oil possible in

(Continued on page 62)

·VEZ·

PATENTS PENDING

for Treating Crude Oil Emulsions



A Formula for Every Type of Cut Oil

Representatives in Principal Fields

WICHITA FALLS, TEXAS.
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The Vez Company

VEZ *Oil Treating Process*

PATENTS PENDING

2221-3 Laws Street DALLAS, TEXAS Telephone 7-4530

Gas Sands in the Coastal Plains of Southwest Texas

Paper read before the Natural Gas Division of the American Gas Association, Dallas Convention, May 8, 1928

By J. B. BEST
Houston Pipe Line Company

PRACTICALLY all of the commercial gas so far found in Southwest Texas is in an area beginning at Laredo, in Webb County, Texas; thence down the Rio Grande River to Rio Grande City; thence easterly to the Gulf of Mexico; thence along the coast to the mouth of the San Antonio River; thence westerly to northern Live Oak County; thence southwesterly to the point of beginning. Outside of this area there is some commercial gas production in Bexar and Medina counties around San Antonio.

In this area are the producing gas fields of Refugio in Refugio County, White's Point in San Patricio County, Saxet in Nueces County, Lucas in Live Oak County, the Three Rivers District consisting of several small pools and scattering gas wells in Live Oak and McMullen counties, Kingsville in Kleburg County, Driscoll in Duval County, Cole-Bruni in Duval and Webb Counties, Carolina-Texas in Webb County, Albercas, St. Albans, Henne-Winch-Fariss pools in Webb and Jim Hogg Counties, and Jennings in Zapata County. Besides this, some gas has been produced from near Edna in Jackson County, an area west of Mathis in San Patricio County, Government Wells in Duval County, the pools along the escarpment south of Mirando City consisting of the Mirando City, Schott, Walcott, Midojuelos, and Aviator pools in Webb County, and Randado and Alworth in Jim Hogg County, and the exhausted Reiser pool in Webb County.

General Geological Structure

The area as outlined in this paper is located on the Gulf Coastal Plain. The general structure can best be explained by quoting from Professional Paper 126 of the U. S. G. S. by Alexander Duessen: "When the material that formed the beds of rock now exposed on the Coastal Plain of Texas were originally deposited in the sea, they lay practically horizontal, but since their deposition, the inland part of the region has been gradually elevated, and they have thus been tilted. The beds, therefore, instead of being horizontal, are now slightly inclined toward the Gulf. Since they were elevated above sea and tilted, these beds have been considerably eroded, so that the surface of the Coastal Plain no longer coincides with the surface of the uppermost layer of rock, but bevels all the gently inclined layers at a slight angle. From place to place, different sheets are exposed to view. The lowermost formation is exposed at the greatest distance from the coast; the uppermost at the coast."

Roughly, the dip of these formations from San Antonio to the coast probably averages between 45 and 60 feet to the mile with the exception of the Reynosa and younger formations near the top and adjoining the coast, which formations probably do not dip much over 20 feet to the mile. Thus the formations near the bottom of a 5000-foot well should outcrop at the surface about 80 or 100 miles farther inland, and shallower formations at a less distance.

Reynosa Escarpment

A prominent feature of this Coastal Plain, both topographically and geologically, is the Bordas or Reynosa escarpment. The Reynosa formation contains some comparatively hard formations consisting of limes and gravel beds cemented with lime forming a conglomerate. This formation forms a seaward sloping plain, the formations, as explained, sloping toward the Gulf at a greater angle than the surface. The western boundary of the Reynosa consists of a westward facing slope known as the Bordas or Reynosa escarpment. This escarpment has been formed because of the superior resistance to erosion of the limestone of the Reynosa. Along this escarpment, many of the oil and gas pools of the district have been located, among these being Lucas, Carolina-Texas, and the oil fields of the Mirando City area.

The Cole pool is located on the Reynosa formation but not on the escarpment, being located about eight miles toward the coast from the escarpment. However, there is a slight escarpment within the Reynosa formation extending intermittently from the north edge of the Cole pool south for several miles.

Local Geological Conditions

The gas pools of South Texas seem to be located on uplifts of an anticlinal nature. Production on these highs is governed almost entirely by sand conditions, that is, where a porous sand is found on the uplift, gas wells up to around ninety million cubic feet daily openflow capacity are brought in. Many wells drilled on locations favorable as to structure find no porous strata and are dry.

There are very few dependable indications of surface structure. Most of the wells have been located because of gas showings in shallow water wells or on topographic highs. Owing to the character of the surface material and existing information, local dips or the correlation of sands in shallow water wells are very misleading. The best surface reflection of subsurface structure is found at Lucas, in Live Oak County, where a large inlier of Oakville sand is found protruding through the overlying Lapara, Lagarto and Reynosa formations. This structure was blocked and drilled by the Houston Oil Company of Texas upon the field work and recommendations of our chief geologist, Mr. Henley. Although the first well found gas and a large gas pool has been opened, production has not followed the outlines of this inlier because of the lenticular nature of the sands in the producing horizon.

By the wording, lenticular sands, the writer does not mean lense shaped in the strict sense of the word; but more the fact that laterally the sands often grade quickly into shales or hard sandy limes so that adjoining wells often miss the sand and find another producing sand at a different level or may miss the producing sands entirely. Especially is thus true of the sands at Kingsville, Refugio, White's Point and Lucas.

The sands in the pools farther south in the Laredo District are not so lenticular and run fairly regular in places. It is noticeable that the producing sands in the pools of the Laredo District are generally more regular in a general north and south direction, probably a little less regular toward the east, and very lenticular toward the west edge of the pool. This lensing of the sand into tight limes and shales on the west furnishes a trap for the gas in effect the same as a closed structure, the gas being prevented from migrating farther up the dip on the west and is held under the hydrostatis pressure of the water on the east. In the Laredo District, this lensing out of the sand on the west edge of the pools occurs frequently along certain fairly well defined lines, so that by careful study of well logs it may be defined before the pool is drilled up and thus be of service in leasing and drilling operations. The actual conditions and causes for this belongs more properly to a paper of more technical geological nature which

FRANKLIN VALVELESS OIL AND GAS ENGINES

He bought the first FRANKLIN VALVELESS and still buys them

Read His Entire Letter

July 26, 1927.

Franklin Valveless Engine Co.,
Franklin, Penna.

Gentlemen:

One day last week my attention was called to the advertisement of a drilling engine, and the success it had had in certain fields, which caused me to wonder if the contractor had ever seen the Franklin Valveless Engine in operation.

The writer in his experience with engines in Pennsylvania, the deep sand of S. E. Ohio, the Texas Panhandle, western Kentucky, and western Wyoming has never seen an engine which fills the bill when called upon under the condition of tne several fields named to compare with the Franklin Valveless Engine.

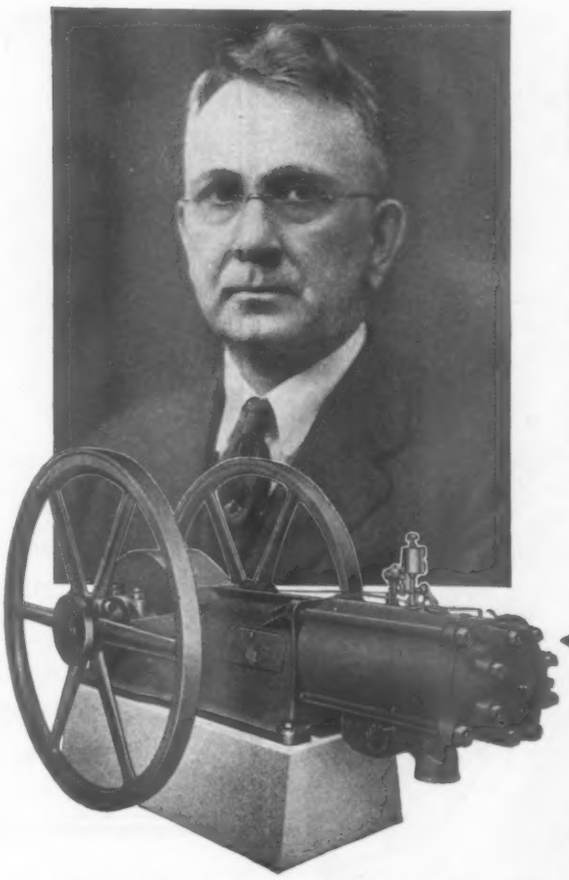
After seeing the test under pony break leverage of the first engine built by your Company in 1911, the writer purchased it and installed it in Tionesta, Penna. The engine has been running ever since and sometimes pumping 23 wells at one time, and to date has had comparatively no repairs.

I shipped a carload of these engines to S. E. Ohio for operations in Clinton sand at 3400 feet depth and they did the work much more satisfactorily than other engines in the field, and we were requested by your company to try out your drilling engine.

It gives me the greatest pleasure to write you, even at this late date, that the engine drilled our No. 11 on the Cobb & Bradley Lease to the depth of 3400 feet in 28 days, not deducting any time for running two strings of casing. The time saved in pulling out and bailing over other engines has been so remarkable that we immediately adopted its use and placed a large order with your company, and have just finished well No. 16 with the same satisfactory results. There are several engines yet to be delivered on this contract which will be used with a great many more, and I am pleased that other contractors in the different fields are getting the same results with your engine and I cannot recommend it too highly.

Respectfully yours,

ARTHUR H. SQUIER.

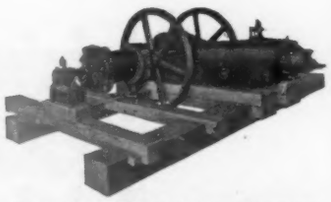


FRANKLIN VALVELESS *Spells "Economy"*

Some operators swing over to Franklins to get away from the cost of boiler repairs. Some are attracted to Franklins by the low fuel requirements. Others like the bath lubrication system which reduces lubrication bills 75%—while still others speak of the small amount of water used.

Every reason given points to economy. It is true, day to day savings seem small, but in the long run they pile up so you can't ignore them. It is no idle statement to say: "A Franklin pays for itself by the running expenses it saves."

FRANKLIN VALVELESS ENGINE COMPANY
Franklin, Penna



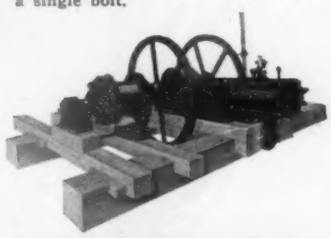
Franklin Oil Drilling Engine

A single cylinder oil engine which will give minimum operating cost, better performance under all conditions, and reduce drilling time. Gives a perfect drilling motion and eliminates "fighting" the engine at any point from top hole to oil. Easy to start in all weathers. Bath lubrication.

The Franklin is a single-cylinder, three-port, two cycle VALVELESS engine. This is Type AO for Mid-Continent or Western Cable Tool Drilling. Price $3700.00 For Eastern Service $2600.00 and $3350.00. Prices F.O.B. Factory. Complete with self-oiling, reversible drilling clutch, circulating pump and fuel tank.

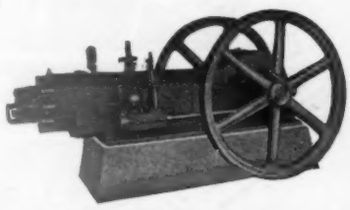
Franklin Gas Pumping Engine

Where gas is available use a Franklin Gas Pumping Engine. It is interchangeable with the Franklin Gas Drilling Engine, using the same block and without changing a single bolt.



Franklin Gas Drilling Engine

These engines can show you a power, speed and flexibility almost unbelievable. Sizes for Western Service, $1725.00 and $2150.00 For Eastern Service $1450.00 and $1725.00. Prices F.O.B. Factory.



Franklin Oil Pumping Engine

They come in 30, 40, 50 and 75 horse-power. Can be equipped with reverse or one way clutch. And don't forget the Franklin construction keeps out sand and grit and eliminates valve grinding.

Distributed by

OIL WELL SUPPLY CO.

Branch Stores in All Oil Fields

"....and it's sixty miles

AJAX ENGINES

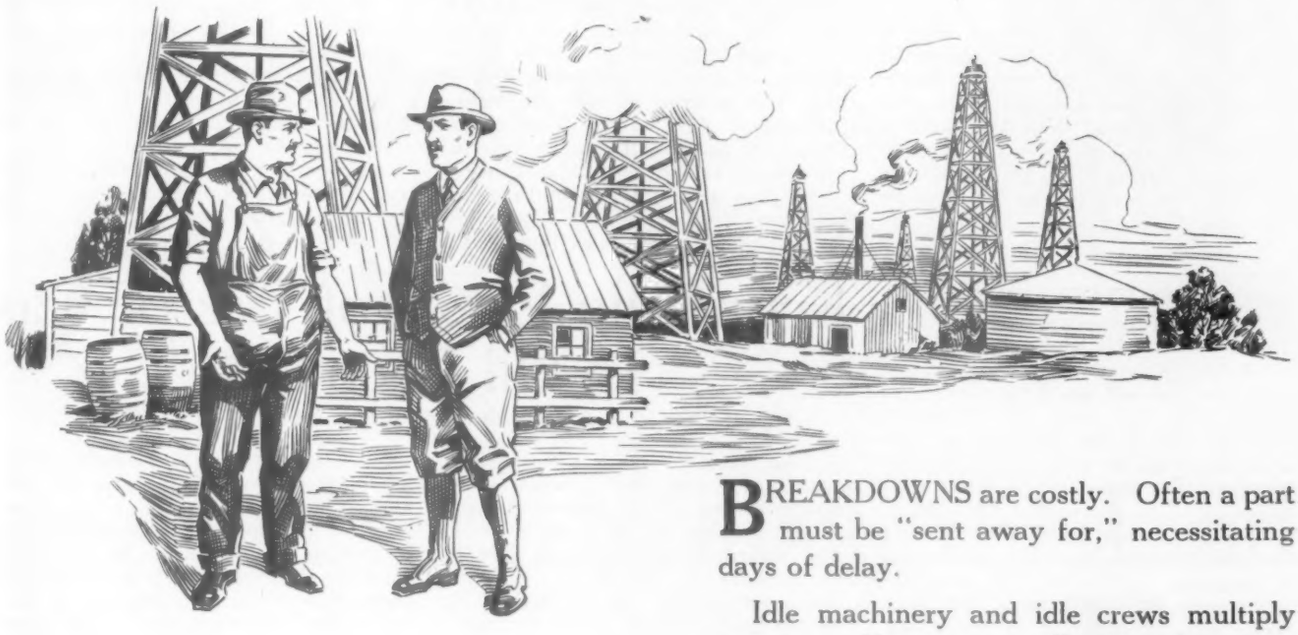
A clutch is *necessary* on gas drilling engines, because of their low starting torque. And a clutch is also necessary to reverse the motion in order to release clutches on draw works.

But a clutch is unnecessary on steam drilling engines. Transmission is direct; power is regulated entirely by the throttle valve. Dependable, flexible steam power, safeguards the tools.

IDEAL-AJAX STEAM DRILLING

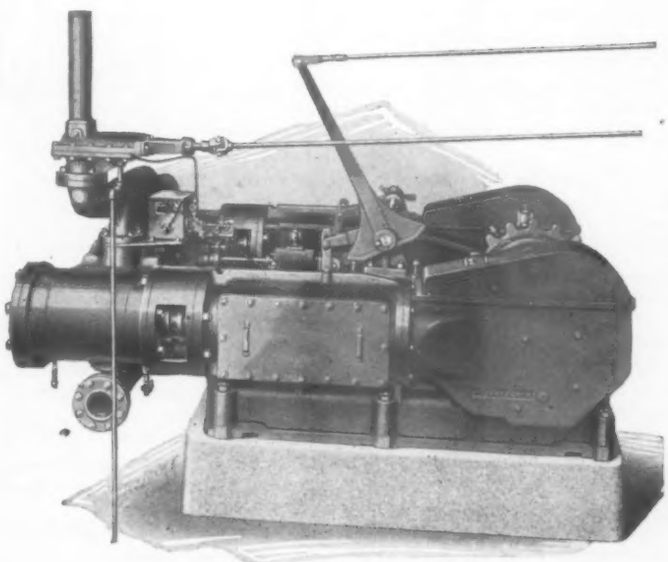
Say you saw it in The OIL WEEKLY

to a new part!"



BREAKDOWNS are costly. Often a part must be "sent away for," necessitating days of delay.

Idle machinery and idle crews multiply expense. But worse still—time lost may keep you from striking oil before competitors.



Breakdowns—are practically unknown to Ajax. Their rugged construction and surplus power eliminate trouble. Moreover, standard interchangeable parts are quickly secured from National Supply Co. stores, in every oil field.

Rely on Ajax and Ideal-Ajax Steam Drilling Engines and avoid costly shut-downs.

Made by

AJAX IRON WORKS

Corry, Pa.

DISTRIBUTED BY

THE NATIONAL SUPPLY COMPANIES

In every oil field

ENGINES DELIVER POWER-PLUS

Say you saw it in The OIL WEEKLY

might not be of interest outside of the geological profession.

Faulting and fracturing may control the west edge of some of the pools and in some cases probably does do so, however, it is the opinion of the writer that probably most of what is thought to be fault displacement is really this lensing out of the sands. Many other geologists of the area, however, differ and think that faulting is more common and sand lensing plays a lesser part. This, though, is more or less academic as the ultimate effect is the same.

Sometimes a sand may be found where expected; it will be porous but apparently perfectly dry and devoid of any oil, gas or water, whereas in a region such as this where the rocks are filled with water under hydraulic pressure, any porous reservoir should be filled with either gas, oil, or water. Such is not always the case in this area, and it occurs with too much regularity to place the cause on mechanical difficulties. In one well at Cole-Bruni, we made eight tests with a patent tester through 26 feet of sand before finally obtaining a gas well in the last four feet and on the eighth test. The other tests, made at intervals of about two or three feet, were dry. The formation consisted of porous sand separated at intervals by hard limey sand.

The sands of the district consist of coarse to fine grained sands, the grains composed principally of quartz and chert. These grains are usually loosely cemented with a very slight coating of lime. The cap rock and other hard streaks in the sand are generally a sand cemented tight and hard with lime. Sometimes, silica cements the sand grains and if the pore spaces are entirely filled, it forms very hard quartzites. Generally, part of the pore space between the gas sand grains is filled with shales, clays, volcanic ash and bentonitic material, the bentonitic material being a form of volcanic ash. The bentonitic material is especially objectionable as it slacks rapidly in water, expanding to several times its original volume and absorbing water many times its weight; by thus expanding it might seal off the pore spaces in the sand adjoining the drill hole, thereby effectively sealing off an oil or gas sand. This idea, so far as I know, first occurred to Paul McFarland of the Sun Oil Company. He persuaded his company to drill in some of their wells in the Aviator pool with oil as drill fluid instead of water. I think that with this method they obtained some small wells where the previous tests had been dry.

The gas pressures and the hydrostatic pressure of the water in the oil sand is subnormal in the Laredo area. The hydrostatic level of water in the oil sands is probably not over 150 or 200 feet above sea level while the surface has an elevation of seven or eight hundred feet. The initial pressures of the gas pools just about correspond to this hydrostatic pressure. This subnormal pressure might be attributed to one of the three following causes:

(1) The elevation of the outcrop of the beds or the water intake, thus, it may be that the elevation of the sands where they outcrop is not sufficient to raise the hydrostatic level higher. Topographically, the gas fields of the Laredo District are in general higher than the outcrop of the gas-bearing formations. The outcrop of the formations, I think, is high enough that the hydrostatic pressure should be greater.

(2) The aridity of the climate may contribute to the subnormal pressure. It is possible that even though the outcrop may be high enough as not to be accountable for the subnormal pressure, that the low rainfall of the region does not furnish enough water to fill the beds up to the outcrop level.

(3) The non-outcropping of the sands may be the cause of the subnormal pressures. The association of non-outcropping with subnormal pressures was first suggested to the writer by Paul Weaver. It may be that as the sands do not outcrop at the surface, no water has reached them since deposition and upon the tilting of the beds, the water level has dropped back to approximately sea level

Economic Effect of Use of Gas In Oil Recovery

(*Continued from page* 56)

the least time; the other is to subsidize natural conditions and produce under pressure control for the greatest economical gain, making use of available gas to assist where natural energy is insufficient to make the well flow.

Unfortunately the first method is the one that has been most used with but little regard to the economic effect it would have on the crude oil market. The result has been a large over-production, the cause of large investments in gasoline plant equipment which soon becomes inoperative, and whose payout status becomes doubtful. This method of operation also throws large volumes of gas on the market during development periods when it has but little value. In many cases millions of cubic feet are allowed to escape to the atmosphere daily, thereby creating a waste which can never be replaced.

Operations such as these have caused the gas lift to be looked on with no little disfavor. The gas lift when properly installed and handled affords one of the best known means of controlling energy loss and prolonging the active life of a well.

Experiments have been conducted where gas is being forced into certain wells where surrounding wells are being produced by the gas lift. The gas leaving the formation with the oil is being recycled through the wells and there is prectically no loss of gas occurring. Results of these indicate that in certain areas it is most economical to recycle "wet" gas instead of extracting the gasoline. An increased gravity oil is produced in so doing.

Pumping Wells

Where a field is being repressured and producing wells are being pumped it is necessary at all times to maintain definite fluid levels in the wells. This can be done by adjusting the speed, stroke and size of pump, also by the location of the working barrel. Where wells are operated from a central power rod line multipliers will be found advantageous. It is extremely desirable never to operate so that the face of the producing formation is uncovered.

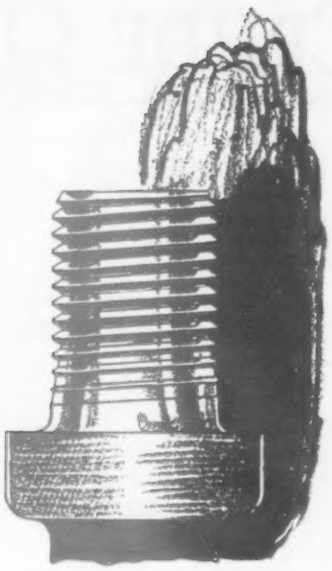
There are a great many areas where the entire gas volume associated with oil has been dissipated before normal production has been recovered. Later on air has been used for stimulating recovery on account of gas shortage. In nearly all cases the injection of air has been advantageous as far as production is concerned but there have been many cases where corrosion due to its use has been so bad that its use has been found prohibitive. The use of natural gas during the early life of such operations would have yielded greater returns from oil and gasoline and would have afforded sufficient gas to recover the greatest amount of production, all of which would have been reflected in the earning on capital invested.

Another use of gas in the field is the prevention of its escape from run, stock and storage tanks in the field. Where several tanks are used in a battery or in a tank farm they can be manifolded with a common breather system so that gas escaping from a tank that is filling will pass into one that is being emptied thereby eliminating the breathing in of air. When air is excluded the evaporation loss is reduced to a minimum and the corrosion where sour oils are handled is reduced to a minimum and the danger of tank explosions is greatly reduced. The use of balloon breather bags attached to the manifold has also been found very economical to compensate for breathing losses occasioned by atmospheric temperature changes.

Oil will retain its gravity when kept in storage equipped as described and the complete installation cost of the extra equipment will generally be paid for in less than a year after put in operation, after which it will show a good return in savings.

Concluding, it can be stated that to get the greatest return from money invested in oil production, the utmost attention should be directed towards utilizing the total amount of potential energy contained in the gas and after this is done find a suitable use for it so that its calorific energy can be efficiently used. Casinghead and residue gas should be used whenever it can supplant natural gas that can be shut in.

It takes LONGER



to make this kind of Sucker Rod

YOU EXPECT a lot out of your Sucker Rods—months, years, of service from *every* joint. By taking a few minutes *longer* to make each Axelson Rod we now put into them an appreciable amount of *extra* service—more than you expect from *any* Rod.

Not speed, but *precision* in manufacture, is our idea. It takes longer to complete a Rod in our factory—despite the fact that we have installed special machinery, designed for our exclusive processes.

But we are elated at the *phenomenal increase* in the durability of Axelson Rods. An evolution of improvements is reflected—higher standards of mechanical perfections have been instituted—not over-night, but through constantly bettering our manufacturing practices over a period of years.

Heat treatment, for instance, is not a recent innovation in the Axelson plant. Years ago we experimented exhaustively with various methods and finally came to the conclusion that a Sucker Rod required an entirely distinct type of heat processing not possible by usual means. Ordinary present-day methods of heat treatment were long ago discarded by us for better and more effective *processes*—which incidentally are exclusively Axelson's.

On Full Production—Axelson A.P.I. and Axelson Standard Sucker Rods

Fortunately, by owning and operating our own research laboratories, we have been in a position to test every conceivable theory of metal composition, heat processing and design, so that we have never "jumped at conclusions," but have consistently improved our Rods—always ahead, never content to wait until competition neared.

Whenever a *genuine* improvement is conceived, Axelson will be the first to place it in your rods.

AXELSON MACHINE COMPANY
P. O. Box 337, LOS ANGELES
TULSA · ST. LOUIS · NEW YORK CITY
Mid-Continent Distributors . . . FRICK-REID SUPPLY CO.
Eastern Distributors . . . . . FRICK & LINDSEY CO.

CRUDE OIL PRICE QUOTATIONS

CURRENT POSTINGS

EASTERN STATES

	May 16 1928
New York Transit	$2.80
Bradford District	2.80
National Transit	2.65
Southwest	2.65
Eureka	2.60
Buckeye	2.35
Macksburg	2.80
Gaines	2.60
Somerset	1.45
Cabell	1.35
Ragland	.95
Corning, 35-cent grade	1.45
Corning, 25-cent grade	1.55
Keister	1.10

CENTRAL STATES

Illinois	1.50
Indiana	1.32
Lima	1.55
Plymouth	1.23
Princeton	1.50
Waterloo	1.35
Wooster	1.57

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, All grades 1.50

MID-CONTINENT

Prairie, Sinclair and Gulf

28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.76

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude
(Humble Oil and Refining Company and Gulf Refining Company)*

	May 16 1928
Below 25 gravity	.76
25 to 25.9 gravity	.81
26 to 26.9 gravity	.86
27 to 27.9 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.76

*Humble's postings stop at 44 and above, at $1.52.

NORTH AND CENTRAL TEXAS

(The Texas Company and Magnolia Petroleum Company)*

24 to 24.9 gravity	.76
25 to 25.9 gravity	.81
26 to 26.9 gravity	.86
27 to 27.9 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40

	May 16 1928
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
42 and above	1.76

*Magnolia Petroleum Company posts the schedule below on oil below 30 gravity and from 30 gravity up to 31.9. Beginning with 32 to 32.9, Magnolia's posting is the same as that of The Texas Company.

Below 30 gravity	.75
30 to 30.9 gravity	.90
31 to 31.9 gravity	1.05

Corsicana heavy is $1.00 posted by Magnolia.

SOUTH TEXAS

Mirando	1.00

SOMERSET

Grayburg

Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 to $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated.)

Gravity (degrees)	Signal Hill	Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Torrance	Richfield	Whittier La Habra	Montebello	Coyotte Hill	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler
14-14-9	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
16-16-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
17-17-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
18-18-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
19-19-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
20-20-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	..	.77	.77	.77	.76	.76
21-21-9	.86	.86	.86	.86	.86	..	.86	.86	.85	.85	.86	.85	..	.79	.79	.79	.77	.77
22-22-9	.87	.87	.87	.87	.87	..	.87	.87	.85	.85	.87	.85	..	.81	.81	.81	.78	.78
23-23-9	.88	.88	.88	.88	.88	..	.88	.88	..	.85	.88	.85	..	.83	.83	.83	.79	.79
24-24-9	.89	.89	.89	.89	.89	..	.89	.89	..	.85	.89	.85	..	.85	.85	.85	.80	.80
25-25-9	.90	.90	.90	.90	.90	.90	.90	.90	..	.86	.90	.86	..	.87	.87	.87	.81	.81
26-26-9	.92	.92	.92	.92	.92	.92	.92	.92	..	.87	.91	.87	..	.89	.89	.89	.83	.82
27-27-9	.94	.94	.94	.94	.94	.94	.94	.94	..	.88	.92	.88	..	.91	.91	.91	.85	.83
28-28-9	.96	.96	.96	.96	.96	.96	.96	.96	..	.89	.93	.89	..	.93	.93	.93	.87	..
29-29-9	.98	.98	.98	..	.98	.98	..	1.00	..	.91	.95	.93	..	.99	.99	.99	.91	..
30-30-9	1.00	1.00	1.00	..	1.00	1.00	..	..	..	..	..	.95	..	1.02	1.02	1.02	.93	..
31-31-9	1.03	1.03	1.03	..	..	1.03	..	..	..	..	..	.97	..	1.05	1.05	1.05	.95	..
32-32-9	1.06	1.06	1.06	..	..	1.06	..	..	..	..	..	.99	..	1.08	1.08	1.08	.97	..
33-33-9	..	..	..	..	..	1.09	..	..	..	..	..	1.01	..	..	..	1.11	.99	..
34-34-9	..	..	..	..	..	1.12	..	..	..	..	..	1.03	..	..	..	..	1.01	..
35-35-9	..	..	..	..	..	1.15	..	..	..	..	..	1.06	..	..	..	..	..	..
36-36-9	..	..	..	..	..	1.18	..	..	..	..	..	1.09	..	..	..	..	..	..
37-37-9	..	..	..	..	..	1.21	..	..	..	..	..	1.12	..	..	..	..	..	..
38-38-9	..	..	..	..	..	1.24	..	..	..	..	..	1.15	..	..	..	..	..	..
39-39-9	..	..	..	..	..	1.27	..	..	..	..	..	..	..	..	..	..	..	..
40-40-9	..	..	..	..	..	1.30	..	..	..	..	..	..	..	..	..	..	..	..
41-41-9	..	..	..	..	..	1.33	..	..	..	..	..	..	..	..	..	..	..	..
42-42-9	..	..	..	..	..	1.36	..											

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Seals Power at every Degree of Wear

	May 16 1928
MARKHAM	
The Texas Company	
All grades	1.00
LULING	
All grades	1.00
PANHANDLE	
GRAY COUNTY	
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Refining Company)	
Below 27 gravity	.60
27 to 27.9 gravity	.65
28 to 28.9 gravity	.70
29 to 29.9 gravity	.75
30 to 30.9 gravity	.80
31 to 31.9 gravity	.85
32 to 32.9 gravity	.90
33 to 33.9 gravity	.93
34 to 34.9 gravity	.96
35 to 35.9 gravity	.99
36 to 36.9 gravity	1.02
37 to 37.9 gravity	1.05
38 to 38.9 gravity	1.08
39 to 39.9 gravity	1.11
40 to 40.9 gravity	1.14
41 to 41.9 gravity	1.17
42 to 42.9 gravity	1.20
43 to 43.9 gravity	1.23
44 and above	1.26
WHEELER COUNTY	
(Humble Oil and Refining Company and Magnolia Petroleum Company)	
Below 29 gravity	.60
29 to 29.9 gravity	.65
30 to 30.9 gravity	.70
31 to 31.9 gravity	.75
32 to 32.9 gravity	.80
33 to 33.9 gravity	.83
34 to 34.9 gravity	.86
35 to 35.9 gravity	.89
36 to 36.9 gravity	.92
37 to 37.9 gravity	.95
38 to 38.9 gravity	.98
39 to 39.9 gravity	1.01
40 to 40.9 gravity	1.04
41 to 41.9 gravity	1.07
42 to 42.9 gravity	1.10
43 to 43.9 gravity	1.13
44 and above	1.16
CARSON-HUTCHINSON COUNTIES	
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Refining Company)	
Below 31 gravity	.60
31 to 31.9 gravity	.65
32 to 32.9 gravity	.70
33 to 33.9 gravity	.73
34 to 34.9 gravity	.76
35 to 35.9 gravity	.79
36 to 36.9 gravity	.82
37 to 37.9 gravity	.85
38 to 38.9 gravity	.88
39 to 39.9 gravity	.91
40 to 40.9 gravity	.94
41 to 41.9 gravity	.97
42 to 42.9 gravity	1.00
43 to 43.9 gravity	1.03
44 and above	1.06
WEST TEXAS	
(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*	
Crane- Upton, Crockett, Pecos and Winkler Counties, all grades	.60

*Gulf does not post in Winkler County; Magnolia posts only in Crane and Upton Counties; The Marland Company, post only in Crane, Upton and Crockett Counties; Southern posts only in Crane, Upton and Winkler Counties.

(Magnolia Petroleum Company)	
Mitchell County	$ .80
Howard-Glasscock County (shallow)	.80
Howard-Glasscock County (deep)	.60
Col-Tex Refining Comp..	
Howard and Mitchell Counties	$ .80
WYOMING-MONTANA	
Wyoming	
Byron	1.33
Ferris	1.60
Elk Basin	1.33
Grass Creek	1.33
Rock Creek	1.25
Lost Soldier	.95
Lance Creek	1.33
Mule Creek	1.10
Notches	.65
Big Muddy	1.25
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.33
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00
Salt Creek	
Midwest Refining Company	
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30
MONTANA	
Sunburst	1.50
Cat Creek	1.33
Lake Basin	2.20
NEW MEXICO	
Artesia	1.00
Hogback	1.38
CANADA	
Oil Springs	2.02
Petrolia	1.95
LOUISIANA-ARKANSAS	
(All Companies)*	
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley**	
Below 28 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.76

*Shreveport-Eldorado's postings stop at above 40 gravity.

**Below 36 gravity, the posting on Cotton Valley is 75 cents. From 36 to 52 and above the regular gravity schedule is followed.

STEPHENS	
(All Companies)	
Below 28	.85
28 to 28.9 gravity	.87
29 to 29.9 gravity	.89
30 to 30.9 gravity	.91
31 to 31.9 gravity	.93
32 and above	.95
SMACKOVER	
(All Companies)	
Below 24 gravity	.7[illegible]
24 and above	.90
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.75
Calion	.75

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

American Petroleum Institute Figures (Barrels of 42 gallons)

	Total Month April	Total Month March	Week End'd May 5	Week En'd April 28
AT ATLANTIC COAST PORTS—				
Baltimore	548,000	708,000	323,000	.....
Boston	174,000	278,000	.....	.....
New York	3,724,000	3,482,000	467,000	832,000
Philadelphia	996,000	1,411,000	395,000	125,000
Others	1,082,000	884,000	406,000	80,000
Total	6,524,000	6,763,000	1,591,000	1,037,000
Daily average	217,467	218,161	227,285	148,143
AT GULF COAST PORTS—				
Galveston District	280,000	230,000	.....	.....
New Orleans and Baton Rouge	704,000	412,000	187,000	230,000
Port Arthur and Sabine District	65,000	206,000	.....	65,000
Tampa	40,000	59,000	40,000	.....
Total	1,053,000	907,000	227,000	295,000
Daily average	252,567	247,419	259,714	190,286
AT ALL UNITED STATES PORTS—				
Daily average	35,1000	29,258	32,429	42,143
Total	7,577,000	7,670,000	1,818,000	1,332,000

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

American Petroleum Institute Figures (Barrels of 42 gallons)

	Total Month April	Total Month March	Week End'd May 5	Week En'd April 28
Baltimore	271,000	250,000	70,000	.....
Boston	215,000	70,000	.....	75,000
New York	724,000	366,000	248,000	90,000
Philadelphia	545,000	312,000	282,000	80,000
Others	236,000	163,000	.....	.....
Total	1,991,000	1,161,000	600,000	245,000
Daily average	66,367	37,452	85,714	35,000
AT GULF COAST PORTS—				
Daily average	.....	.....	.....	.....
Total Atlantic and Gulf Coast Ports	1,991,000	1,161,000	600,000	245,000
Daily average	66,367	37,452	85,714	35,000
DISTRIBUTION OF TOTAL CALIFORNIA OIL RECEIPTS IS AS FOLLOWS:				
Crude	413,000	252,000	90,000	90,000
Gasoline	1,388,000	729,000	345,000	155,000
Kerosene	.....	96,000	.....	.....
Gas oil	60,000	.....	165,000	.....
Fuel Oil	72,000	66,000	.....	.....
Lubricants	58,000	18,000	.....	.....
Total	1,991,000	1,161,000	600,000	245,000

The Split liner is an exclusive feature

The PERFECTION *Core Barrel*

If you could reach to the bottom of the hole, you could not hand cut a sample of the formation as clean and accurate as the Perfection Core.

Exclusive patented features compel this barrel to take only CLEAN cores that come out UNBROKEN. Simple construction of the best grade Chrome Nickel Steel makes it always dependable.

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HERCULES SUPPLY CO., *Vernon, Texas*
HERCULES SUPPLY CO., *Pyote, Texas*
CONTINENTAL SUPPLY CO., *Duncan, Okla.*
CONTINENTAL SUPPLY CO., *Healdton, Okla.*
OKLAHOMA OFFICE: *2 East California Street, Oklahoma City*

Summary of Field Operations for April, 1928

EASTERN STATES

	Completions	Producers	Fas Wells	Failures	Initial Prod.
Pennsylvania	111	83	21	7	293
New York	26	25	..	1	66
Tennessee	9	4	1	4	78
West Virginia	93	23	52	18	304
Kentucky	102	69	3	30	3,397
Indiana	9	1	4	4	23
Illinois	4	1	..	3	3
Michigan	14	7	1	6	947
Ohio	66	37	16	13	3,227
Totals	434	250	98	86	8,338

PENNSYLVANIA

Greene	7	..	5	2	....
Bradford	72	68	2	2	248
Butler	8	3	3	2	13
Clarion	9	3	5	1	12
Venango	12	7	5	..	15
Center-Middle	2	2	..	..	5
Allegheny	1	..	1	..	....
Totals	111	83	21	7	293

NEW YORK

Allegany	26	25	..	1	66

TENNESSEE

Clay	5	4	..	1	78
Putnam	2	..	1	1	....
Macon	1	..	..	1	....
Coffee	1	..	..	1	....
Totals	9	4	1	4	78

WEST VIRGINIA

Lincoln	8	..	8	..	....
Gilmer	10	1	6	3	100
Ritchie	15	6	5	4	31
Marion	4	..	3	1	....
Boone	7	..	6	1	....
Calhoun	8	1	5	2	50
Wood	3	1	..	2	2
Braxton	2	..	..	2	....
Tyler	3	3	..	..	9
Mingo	1	1	..	..	15
Clay	1	1	..	..	10
Kanawha	1	1	..	..	8
Doddridge	1	1	..	..	2
Wetzel	7	2	4	1	13
Lewis	4	..	4	..	....
Roane	5	2	3	..	47
Cabell	2	..	2	..	....
Pleasants	3	..	1	2	....
Brooke	1	1	..	..	7
Harrison	3	1	2	..	5
Monogalia	2	..	2	..	....
Wayne	1	..	1	..	....
Marshall	1	1	..	..	5
Totals	93	23	52	18	304

OHIO

Southeastern—					
Washington	2	2	..	..	4
Monroe	2	..	1	1	....
Jefferson	3	2	..	1	28
Central—					
Licking	6	4	2	..	49
Guernsey	2	2	..	..	65
Ashland	7	1	3	3	30
Holmes	5	1	2	2	15
Athens	3	1	..	2	10
Coshocton	2	1	1	..	105
Wayne	3	1	1	1	30
Fairfield	1	..	1	..	....
Cuyahoga	2	..	1	1	....
Perry	16	16	..	..	2,707
Meigs	2	..	..	2	....
Knox	1	..	1	..	....
Gallia	1	..	1	..	....
Northwestern—					
Wood	3	2	1	..	39
Ottawa	1	1	..	..	40
Seneca	2	2	..	..	90
Mercer	1	1	..	..	15
Darke	1	..	1	..	....
Totals	66	37	16	13	3,227

KENTUCKY

Barren	16	15	..	1	701
McLean	1	..	..	1	....
Ohio	35	24	..	11	1,778
Daviess	20	12	..	8	825
Allen	3	..	..	3	....
Warren	3	3	..	..	5
Caldwell	1	..	1	..	....
Wayne	4	4	..	..	27
Estill	4	3	..	1	24
Lee-Owsley	2	..	..	2	....
Powell	1	1	..	..	5
Wolfe	3	2	..	1	22
Johnson-Magoffin	4	4	..	..	8
Hancock	2	..	..	2	....
Floyd	1	..	1	..	....
Knox	1	..	1	..	....
Elliott	1	1	..	..	2
Totals	102	69	3	30	3,397

INDIANA

Gibson	1	1	..	..	23
Pike	1	..	..	1	....
Harrison	2	..	2	..	....
Blackford	2	..	..	2	....
La Grange	1	..	1	..	....
Jay	1	..	1	..	....
Daviess	1	..	..	1	....
Totals	9	1	4	4	23

ILLINOIS

Wabash	1	..	..	1	....
Cumberland	1	1	..	..	3
Clark	2	..	..	2	....
Totals	4	1	..	3	3

MICHIGAN

Muskegon	9	5	1	3	875
Alpena	1	..	..	1	....
Monroe	2	2	..	..	72
Gratiot	1	..	..	1	....
Saginaw	1	..	..	1	....
Totals	14	7	1	6	947

MOUNTAIN STATES

WYOMING

Field—	Barrels
Salt Creek	1,174,200
Grass Creek	76,600
Elk Basin	32,650
Big Muddy	80,750
Lost Soldier	145,400
Rock River	77,150
Lance Creek	21,800
Others	118,050
Total	1,726,600

MONTANA

Cat Creek	53,650
Kevin-Sunburst	296,100
Others	4,500
Total	354,250

COLORADO

Moffats (Craig)	45,900
Fort Collins	87,000
Florence	37,900
Others	34,000
Total	204,800

NEW MEXICO

Artesia	34,600
Table Mesa	5,000
Hogback	15,000
Rattlesnake	8,950
Others	6,000
Total	69,550
Total Mountain States	2,355,200

MOUNTAIN STATES RECAPITULATION

	Completions	Producers	Fas Wells	Failures	Initial Prod.
Wyoming	3	3	..	..	295
Montana	7	5	2	..	5,368
Colorado	4	4	..	..	1,857
New Mexico	3	2	1	..	9
Totals	17	14	3	..	7,529

WYOMING

Spindle Top	1	1	..	..	45
Teapot	2	2	..	..	250
Totals	3	3	..	..	295

COLORADO

Florence	2	2	..	..	207
South McCollum	1	1	..	..	1,500
Wellington	1	1	..	..	150
Totals	4	4	..	..	1,857

MONTANA

Bannatyne	2	2	..	..	120
Kevin-Sunburst	3	2	1a	..	5,098
Pondera	1	1	..	..	150
Sweet Grass Hills	1	..	1b	..	....
Totals	7	5	2	..	5,368

a—Includes 4,500,000 feet of gas.
b—Includes 6,000,000 feet of gas.

NEW MEXICO

Lea County	1	..	1a	..	....
San Juan County	1	1	..	..	8
Ute Indian Lands	1	1	..	..	1
Totals	3	2	1	..	9

a—Includes 3,000,000 feet of gas.

OKLAHOMA

Beckham	1	..	..	1	....
Bryan	1	..	..	1	....
Caddo	3	2	1	..	65
Carter	11	10	..	1	1,163
Cotton	1	1	..	..	40
Creek	28	9	4	15	1,135
Garfield	1	..	..	1	....
Garvin	1	1	..	..	45
Grady	17	2	10	5	300
Hughes	2	2	..	..	280
Jefferson	3	3	..	..	265
Kay	17	..	5	12	....
Kiowa	1	..	..	1	....
Lincoln	3	2	1	..	925
Logan	1	..	..	1	....
Mitchell	2	1	1	..	15
Muskogee	46	17	3	26	2,025
Okfuskee	7	2	3	2	65
Okmulgee	18	6	8	4	104
Osage	29	21	1	7	8,546
Pawnee	2	1	..	1	20
Payne	3	..	2	1	....
Pontotoc	21	7	5	9	783
Pottawatomie	4	4	..	..	447
Seminole	30	19	1	10	12,128
Sequoyah	1	..	1	..	....
Stephens	24	13	2	9	4,744
Tulsa	12	6	1	5	270
Wagoner	8	1	..	7	5
Totals	298	130	49	119	33,370

OKLAHOMA PRODUCTION SUMMARY

Field—	Barrels
North Braman	87,600
South Braman	53,200
Blackwell	110,200
Hubbard	87,250
Thomas	42,350
Tonkawa	433,150
Garber	269,150
Burbank	1,138,250
Osage	893,600
Watchorn	22,950
Cushing	622,750
Yale-Jennings	263,800
Davenport	65,100
Bristow-Slick	727,850
North Okmulgee	465,700
Lyons-Deaner	208,050
Stroud	33,000
Cromwell	298,300
Papoose	146,150
Wewoka	230,200
Seminole	1,641,850
Searight	487,700
Earlsboro	2,822,500
Duncan District	196,500
Graham	174,000
Healdton	420,250
Scholem Alechem	418,500
Bowlegs	2,227,700
Little River	1,228,350
Fox	52,400
Hewitt	260,900
Others	2,484,200
Total	18,613,450

KANSAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Butler	3	2	..	1	245
Chautauqua	1	..	..	1	....
Clark	1	..	..	1	....
Cowley	15	2	5	8	160
Elk	7	2	..	5	65
Ellis	1	..	..	1	....
Greenwood	23	13	1	9	1,530
Lyon	1	..	..	1	....
Marion	10	3	..	7	550
Marshall	1	..	..	1	....
Morris	2	1	..	1	30
Sumner	24	21	1	2	14,528
Wilson	1	1	..	..	35
Woodson	3	..	..	3	....
Totals	93	45	7	41	17,143

KANSAS PRODUCTION SUMMARY

Field—	Barrels
Greenwood County	889,700
Florence-Covert	42,000
Peabody-Elbing	110,200
Eldorado-Towanda	423,350
Augusta-Fox Bush	122,550
Rainbow Bend	50,900
Russell	87,050
Churchill	356,350
Oxford	530,600
Others	752,300
Total	3,365,000

CALIFORNIA

Field—	Completions	Producers	Fas Wells	Failures	Initial Prod.
Baldwin Hills-Inglewood	1	1	..	..	160
Cat Canyon	..	..	..	..	....
Coalinga	2	2	..	..	210
Dominguez	..	..	..	..	....
East Coyote	..	..	..	..	....
Huntington Beach	2	2	..	..	435
Kern Front	4	4	..	..	640
Long Beach	23	23	..	..	48,210
McKittrick	1	1	..	..	160
Midway	..	..	..	..	....
Montebello	1	..	..	1	....
Mt. Poso	..	..	..	..	....
Richfield	4	4	..	..	905
Rincon	2	2	..	..	2,500
Round Mountain	..	..	..	..	....
Seal Beach	2	2	..	..	2,250
Sunset	..	..	..	..	....
Ventura	4	4	..	..	6,100
Wheeler Ridge	..	..	..	..	....
Wildcats	5	..	..	5	....
Totals	51	45	..	6	61,570

CALIFORNIA PRODUCTION SUMMARY

Field—	Barrels
Santa Fe Springs	1,113,500
Long Beach	4,651,500
Huntington Beach	1,672,000
Torrance	555,000
Dominguez	375,000
Rosecrans	200,600
Inglewood	880,500
Midway-Sunset	2,222,500
Ventura Avenue	1,526,000
Seal Beach	1,176,000
Others	4,033,900
Total	18,406,500

ARKANSAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Bradley	..	..	..	..	....	.....
Champagnolle	..	..	..	..	....	83,300
El Dorado	..	..	..	..	....	161,800
Nevada	1	1	..	..	50	44,100
Lisbon	..	..	..	..	....	68,550
Smackover	3	3	..	..	1,882	2,111,150
Stephens	..	..	..	..	....	31,850
Others	..	..	..	..	....	3,350
Wildcats	4	..	..	4	....	.....
Totals	8	4	..	4	1,932	2,504,100

TEXAS

EAST TEXAS

Field—	Completions	Producers	Fas Wells	Failures	Initial Prod.
Harrison County	1	..	1a	..	....
Panola County	5	..	5b	..	....
Marion County	1	1	..	..	5
Wildcats	2	..	..	2	....
Totals	9	1	6	2	5

a—Includes 3,000,000 feet of gas.
b—Includes 16,000,000 feet of gas.

TEXAS RECAPITULATION

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
N. Texas	118	75	1	42	5,608	2,065,250
East Central Texas	1	..	..	1	....	706,750
East Texas	9	1	6	2	5	.....
Gulf Coast	64	39	2	23	20,614	3,080,450
Sw. Texas	12	7	2	3	655	709,050
Panhandle	25	12	7	6	9,050	2,228,400
West Texas	78	52	..	26	217,165	11,284,250
Central West Texas	211	86	13	112	7,696	1,641,900
Totals	518	272	31a	215	260,793	21,715,850

a—Includes 204,000,000 feet of gas.

CENTRAL-WEST TEXAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Brown Co.	64	36	4a	24	3,627	372,300
Young Co.	63	26	..	37	1,472	240,700
Eastland-Desdemona	21	5	2b	14	895	233,550
Stephens Co.	6	1	1c	4	130	232,450
Shackelford	20	13	..	7	1,452	284,500
Callahan Co.	8	..	1d	7	....	116,250
Comanche Co.	5	2	2e	1	60	....
Throckmorton	..	..	..	..	....	30,000
Coleman Co.	14	1	3f	10	....	54,400
Jack Co.	9	2	..	7	60	43,550
McCulloch Co.	1	..	..	1	....	....
Palo Pinto Co	..	..	..	..	....	14,550
Others	..	..	..	..	....	19,650
Totals	211	86	13	112	7,696	1,641,900

a—Includes 4,000,000 feet of gas.
b—Includes 3,500,000 feet of gas.
c—Includes 750,000 feet of gas.
d—Includes 2,000,000 feet of gas.
e—Includes 4,500,000 feet of gas.
f—Includes 5,500,000 feet of gas.

TEXAS PANHANDLE

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Carson Co.	2	..	2a	..	....	218,850
Dallam Co.	1	..	..	1	....	e
Gray Co.	15	11	2b	2	9,025	618,150
Hutchinson County	1	1	..	..	25	1,256,550
Oldham Co.	1	..	..	1	....	e
Potter Co.	1	..	1c	..	....	e
Sherman Co.	1	..	..	1	....	e
Wheeler Co.	3	..	2d	1	....	29,650
Others	..	..	..	..	....	5,200
Totals	25	12	7	6	9,050	2,228,400

a—Includes 61,500,000 feet of gas.
b—Includes 4,000,000 feet of gas.
c—Includes 25,000,000 feet of gas.
d—Includes 56,000,000 feet of gas.
e—Included in others.

TEXAS GULF COAST

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Barbers Hill	..	..	..	..	....	17,550
Batson	2	1	..	1	5	43,250
Big Creek	2	1	..	1	300	46,050
Blue Ridge	6	5	..	1	4,520	185,650
Boling	..	..	..	..	....	64,300
Damon Md.	..	..	..	..	....	26,800
Goose Creek	3	1	..	2	100	218,650
High Island	..	..	..	..	....	a
Hull	7	5	1	1	2,538	333,700
Humble	..	..	..	..	....	35,800
Nash Dome	..	..	..	..	....	a
Orange	6	4	..	2	1,101	143,600
Orchard	..	..	..	..	....	a
Pierce Jct.	11	9	..	2	9,900	343,900
Saratoga	..	..	..	..	....	33,150
Sour Lake	3	3	..	..	160	103,950
So. Liberty	2	2	..	..	25	126,050
Spindle Top	6	5	..	1	415	1,036,900
W. Columbia	1	1	..	..	500	259,850
Others	..	..	..	..	....	61,300
Wildcats	15	2	1	12	1,050	.....
Totals	64	39	2	23	20,614	3,080,450

a—Included in "Others".

SOUTHWEST TEXAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Dale	3	3	..	..	380	37,200
Duval County	2	1	1a	1	10	c
Jim Hogg Co.	4	2	..	2	65	c
Laredo Dist.	2	1	1b	..	200	192,450
Luling	..	..	..	..	....	402,200
Lytton Sprgs	..	..	..	..	....	43,150
Somerset	..	..	..	..	....	22,050
Others	..	..	..	..	....	12,000
Wildcats	..	..	..	..	....	.....
Totals	11	7	2	3	655	709,050

a—Includes 10,000,000 feet of gas.
b—Includes 8,000,000 feet of gas.
c—Included in "Others".

EAST CENTRAL TEXAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Corsicana-Powell	..	..	..	..	....	353,900
Currie	..	..	..	..	....	15,700
Mexia	..	..	..	..	....	221,650
Nigger Creek	..	..	..	..	....	39,100
Richland	..	..	..	..	....	15,700
Wortham	..	..	..	..	....	60,700
Wildcats	1	..	..	1	....	.....
Totals	1	..	..	1	....	706,750

WEST TEXAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Crane County	1	1	..	..	325	a2,286,550
Crockett Co.	1	1	..	..	300	83,100
Howard Co.	5	5	..	..	1,200	121,750
Jones Co.	2	2	..	..	275	39,450
Mitchell-Scurry	..	..	..	..	....	95,450
Pecos Co.	11	10	..	1	74,360	1,510,250
Reagan Co.	2	2	..	..	480	565,500
Winkler Co.	30	29	..	1	140,020	6,525,350
Wildcats	26	2	..	24	205	.....
Others	..	..	..	..	....	56,850
Totals	78	52	..	25	217,165	11,284,250

a—Includes Upton County.

NORTH TEXAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Archer Co.	50	30	..	20	2,880	576,300
Baylor Co.	..	..	..	..	....	3,000
Burkburnett	5	3	..	2	44	373,750
Clay Co.	3	2	..	1	19	15,700
Cooke Co.	3	1	..	2	20	b
Electra	4	3	..	1	75	359,600
Foard Co.	..	..	..	..	....	.....
Grayson Co.	1	..	..	1	....	....
K-M-A Iowa Park	21	14	..	7	170	70,000
Montague Co.	12	10	..	2	255	357,100
South Vernon-Wilbarger	19	12	1a	6	2,145	309,600
Totals	118	75	1	42	5,608	2,065,050

a—Includes 250,000 feet of gas.
b—Included under Montague.

LOUISIANA

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Bellevue	..	..	..	..	....	32,900
Bossier Parish	7	2	5a	..	170	....
Caddo Parish	2	1	1b	..	40	426,850
Cotton Valley	..	..	..	..	....	247,150
De Soto Par'h	..	..	..	..	....	124,250
Elm Grove	..	..	..	..	....	16,600
Haynesville	..	..	..	..	....	189,000
Homer	..	..	..	..	....	133,050
Morehouse Parish	..	..	..	..	....	....
Ouachita Parish	5	..	5c	..	....	....
Pleasant Hill	..	..	..	..	....	17,200
Richland Par'h	6	..	6d	..	....	....
Sabine Parish	..	..	..	..	....	....
Union Parish	4	..	4e	..	....	....
Webster Parish	8	1	7f	..	3,595	219,650
Wildcats	17	..	..	17	....	....
Totals	49	4	28	17	3,805	1,406,650
So. Louisiana	18	8	..	10	3,345	483,750
Ttl Louisiana	67	12	28	27	7,150	1,890,400

a—Includes 69,500,000 feet of gas.
b—Includes 11,000,000 feet of gas.
c—Includes 26,500,000 feet of gas.
d—Includes 205,500,000 feet of gas.
e—Includes 17,500,000 feet of gas.
f—Includes 134,000,000 feet of gas.

LOUISIANA GULF COAST

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Bayou B'llion	..	..	..	..	....	27,500
E. Hackberry	..	..	..	..	....	68,900
Edgerly	1	1	..	..	5	33,000
Evangeline	3	2	..	1	240	32,900
Lockport	2	2	..	..	900	133,550
Sorr'nto Dome	..	..	..	..	....	....
Sulph'r Dome	..	..	..	..	....	41,150
Sweet Lake	..	..	..	..	....	....
Vinton	1	..	..	1	*	140,100
Others	..	..	..	..	....	6,650
Wildcats	11	3	..	8	2,200	....
Totals	18	8	..	10	3,345	483,750

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1927	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Ave.	United States Total
January	598,500	117,200	466,400	173,900	52,900	131,550	107,850	84,450	653,450	2,386,200	73,972,150
February	693,350	116,250	479,800	154,600	52,800	128,200	107,150	85,300	642,700	2,460,150	68,884,300
March	710,350	116,100	475,000	154,750	51,450	124,500	104,400	87,600	640,850	2,465,000	76,414,900
April	723,700	115,400	477,300	155,100	50,500	113,350	108,000	89,350	644,550	2,477,250	74,317,750
May	742,200	114,600	488,700	151,300	47,450	112,700	114,000	89,300	633,550	2,493,800	77,307,700
June	768,600	112,200	480,800	151,650	49,150	112,450	111,850	86,050	638,550	2,511,300	75,338,900
July	846,750	107,750	475,800	142,950	56,200	109,900	111,800	86,950	620,700	2,558,800	79,322,300
August	832,900	105,100	483,450	139,350	56,950	104,750	114,600	80,750	621,450	2,539,300	78,717,850
September	797,450	105,200	493,750	142,900	53,450	101,350	110,800	74,500	637,250	2,516,650	75,498,900
October	782,300	105,100	497,900	138,400	51,300	100,450	113,600	73,250	629,000	2,491,300	77,230,000
November	766,900	106,650	501,750	138,100	49,400	97,850	114,900	75,050	623,850	2,474,450	74,233,500
December	720,700	106,150	531,650	138,500	47,200	94,950	111,250	77,150	624,600	2,452,150	76,017,050
1928											
January	675,450	108,300	523,300	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,250	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April	620,450	112,150	617,850	118,850	46,900	83,450	107,000	78,500	613,550	2,398,700	71,961,100
May 5	617,100	110,300	672,750	123,750	44,800	84,100	110,500	81,050	622,300	2,466,650	17,266,550
May 12	613,300	109,150	557,550	129,850	43,450	86,100	111,500	81,600	622,900	2,355,400	16,487,800
Increase	.....	.....	.....	6,100	.....	2,000	1,000	550	600	.....	.....
Decrease	3,800	1,150	115,200	.....	1,350	.....	.....	.....	.....	111,250	778,750

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	May 12	May 5
Carson County	6,950	7,400
Gray County	18,650	18,750
Hutchinson County	39,900	41,500
Wheeler County	1,100	1,000
Others	200	150
Totals	66,800	68,800

NORTH TEXAS

Archer County	22,750	22,500
Baylor County	100	100
Burkburnett	11,500	11,000
Clay County (Petrolia)	500	500
Electra	12,700	12,850
Iowa Park-KMA	3,600	3,500
Montague and Cooke Cos.	12,100	12,300
Wilbarger	12,350	12,000
Totals	75,600	74,750

WEST CENTRAL TEXAS

Brown County	12,700	12,900
Callahan County	3,750	3,700
Coleman County	1,500	1,650
Eastland-Desdemona	7,550	7,750
Jack County	1,400	1,300
Palo Pinto County	450	450
Shackelford County	9,750	9,600
Stephens County	8,000	8,250
Throckmorton County	1,000	1,000
Young County	7,900	8,000
Others	750	900
Totals	54,750	55,500

WEST TEXAS

Crane-Upton Counties	71,800	72,800
Crockett County	2,350	2,700
Howard County	4,300	4,000
Jones County	1,300	1,350
Mitchell-Scurry Cos.	3,000	3,100
Pecos County	51,500	49,700
Reagan County	18,150	18,500
Winkler County	159,700	272,800
Others	1,800	2,000
Totals	313,900	426,950

EAST CENTRAL TEXAS

Corsicana-Powell	11,650	11,750
Currie	500	500
Mexia	7,350	7,400
Nigger Creek	1,350	1,350
Richland	500	500
Wortham	2,000	2,000
Totals	23,350	23,500

SOUTHWEST TEXAS

Dale	1,000	1,100
Laredo District	6,000	6,100
Luling	13,650	13,500
Lytton Springs	1,400	1,450
Somerset	700	700
Others	400	400
Totals	23,150	23,250
T'tl Tex. (Outside Gulf Coast)	557,550	672,750

TEXAS GULF COAST

Barbers Hill	500	550
Batson	1,400	1,500
Big Creek	1,450	1,500
Blue Ridge	9,000	6,900
Boling	3,100	2,400
Damon Mound	900	800
Goose Creek	7,200	7,300
Hull	10,900	10,750
Humble	1,050	1,100
Orange County	4,400	4,600
Pierce Junction	13,300	12,000
Saratoga	1,050	1,000
Sour Lake	3,500	3,500
South Liberty	3,550	3,700
Spindle Top	38,350	37,200
West Columbia	9,700	8,300
Others	2,500	3,000
Totals	111,850	106,100
Texas Total	669,400	778,850

OKLAHOMA

North Braman	3,050	3,200
South Braman	1,550	1,750
Blackwell	3,650	3,650
Hubbard	2,900	2,850
Thomas	1,450	1,400
Tonkawa	13,800	14,100
Garber	8,700	8,750
Burbank	34,850	35,900
Osage (outside Burbank)	28,800	28,900
Watchorn	800	800
Cushing	20,300	20,350
Yale Jennings	9,050	9,050
Davenport	2,000	2,100
Bristow Slick	23,900	23,900
North Okmulgee	15,500	15,500
Lyons Deaner	6,500	6,550
Stroud	1,050	1,100
Cromwell	9,750	9,850
Papoose	4,500	4,650
Wewoka	7,200	7,300
Seminole	54,950	53,550
Bowlegs	68,350	70,500
Searight	14,800	14,950
Little River	45,100	48,400
Earlsboro	95,750	93,500
Duncan District	6,650	6,550
Graham	5,800	5,800
Fox	1,700	1,700
Healdton	13,950	13,950
Hewitt	9,000	9,000
Scholem Alechem	13,000	13,600
Others	84,950	83,950
Totals	613,300	617,100

CALIFORNIA

Santa Fe Springs	36,500	37,000
Long Beach	173,000	171,500
Huntington Beach	55,000	55,500
Torrance	18,500	18,500
Dominguez	12,000	12,500
Rosecrans	6,000	6,500
Inglewood	29,000	29,000
Midway-Sunset	73,500	73,500
Ventura Avenue	49,000	49,000
Seal Beach	38,000	38,500
Others	132,400	130,800
Totals	622,900	622,300

KANSAS

Greenwood County	29,500	29,750
Florence-Covert	1,350	1,400
Peabody-Ebling	3,650	3,650
Eldorado-Towanda	14,100	14,100
Augusta-Fox Bush	4,050	4,050
Rainbow Bend	1,700	1,650
Russell	3,300	3,100
Churchill	11,050	11,400
Oxford	15,500	16,450
Others	24,950	24,750
Totals	109,150	110,300

NORTH LOUISIANA

	May 12	May 5
Homer	4,450	4,400
Haynesville	6,300	6,300
Caddo Light	9,750	9,850
Caddo Heavy	3,750	3,900
DeSoto-Red River	4,100	4,200
Elm Grove	400	600
Bellevue	1,050	1,050
Cotton Valley Light	2,100	*
Cotton Valley Heavy	4,250	7,200
Urania	6,750	6,750
Pleasant Hill	550	550
Totals North Louisiana	43,450	44,800

*Included with Cotton Valley Heavy.

LOUISIANA GULF COAST

Edgerly	1,100	1,100
Evangeline	1,100	1,050
Lockport	4,100	3,950
Vinton	5,000	4,600
East Hackberry	3,350	3,650
Bayou Boullion	400	400
Sulphur Dome	2,600	2,550
Others	350	350
Total Louisiana Gulf Coast	18,000	17,650
Louisiana total	61,450	62,450

ARKANSAS

El Dorado	5,300	5,300
Champagnolle	7,050	6,300
Smackover Light	7,700	7,600
Smackover Heavy	61,150	60,100
Stephens	1,050	1,050
Nevada	1,550	1,400
Lisbon	2,200	2,250
Others	100	100
Totals	86,100	84,100

MOUNTAIN STATES

WYOMING

Salt Creek	41,350	40,050
Grass Creek	2,450	2,600
Elk Basin	1,300	1,100
Big Muddy	2,650	2,750
Lost Soldier	5,000	5,150
Rock River	2,500	2,700
Lance Creek	750	750
Others	5,800	4,950
Totals	61,800	60,050

MONTANA

Cat Creek	1,750	1,800
Sunburst	9,600	9,800
Others	150	150
Totals	11,500	11,750

COLORADO

Moffats (Craig)	1,350	1,600
Fort Collins	2,900	2,900
Florence	1,150	1,450
Others	950	900
Totals	6,350	6,850

NEW MEXICO

Table Mesa	.....	50
Artesia	1,200	1,200
Hogback	500	500
Rattlesnake	50	450
Others	200	200
Totals	1,950	2,400
Totals Mountain States	81,600	81,050

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.	111,500	110,500

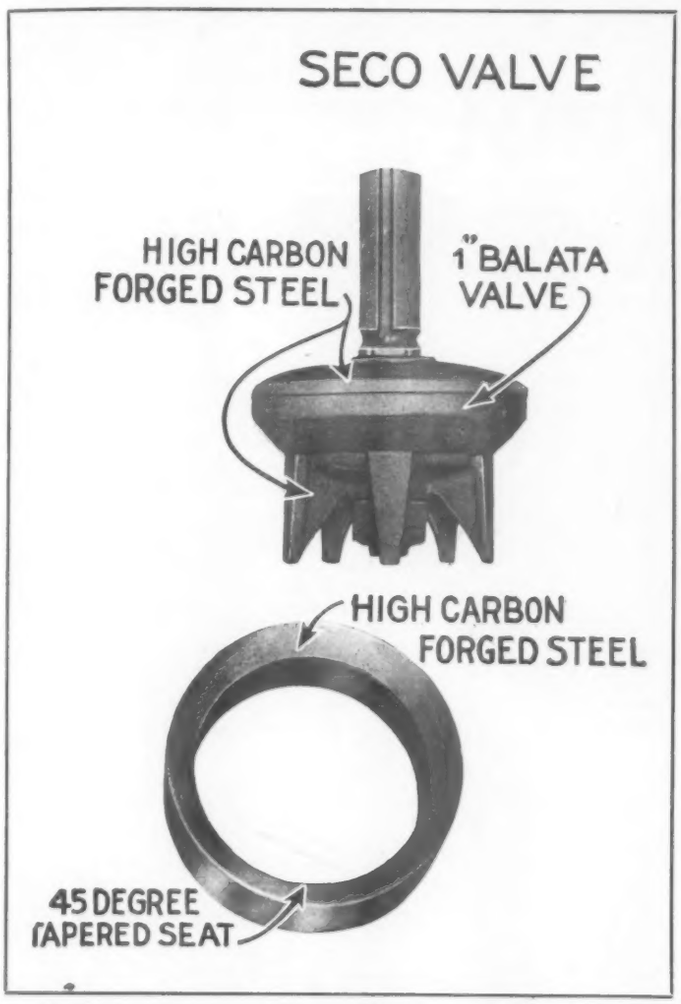
PRODUCTION SUMMARY

East of Rockies	1,650,900	1,763,300
U. S. total	2,355,400	2,466,650

This straight shot VALVE ... puts YOUR Old Pumps in a class with NEW models

Oil Men!

Here is a taper seated valve that has been thoroughly tested and adopted by all pump manufacturers in later designed pumps.



In order to give you the same advantages for your old pumps, the MISSION Sales Company are manufacturing and have ready for IMMEDIATE DELIVERY this NEW type valve for all 6¾" OLD style pumps.

It is accurately machined to suit the various makes of pumps.

THIS VALVE IS MADE OF

Drop-Forged Steel

THROUGHOUT, WITH 1" Balata Insert . . . . sold to you at a cost no greater than for the old style, flat-seated, cast iron type.

A real Money-Maker for the practical oil man

Ask for the Seco Valve at Your Supply Store

Write us for Complete Information

MISSION

Sales Company, Inc.,
Esperson Bldg.
HOUSTON

Say you saw it in The OIL WEEKLY

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	4	4	3	3	..	..	1	1	4,130	166
California	16	15	14	12	..	..	2	3	16,225	8,800
Colorado	1	1	1	1	..	..	..	..	100	80
Illinois	3	3	1	2	..	..	2	1	2	....
Indiana	1	2	..	1	..	..	1	1	....	70
Kansas	13	17	5	9	..	2	8	6	775	3,785
Kentucky	25	38	14	23	2	1	9	14	1,135	485
Louisiana	13	18	2	3	6	7	5	8	130	3,485
Michigan	..	1	..	1	..	..	..	..	....	11,640
Montana	5	5	4	5	..	..	1	..	125	....
Ohio	21	19	10	11	9	6	2	2	893	509
Oklahoma	73	68	40	32	4	17	29	19	17,862	9,470
Pennsylvania	7	1	1	1	3	..	3	..	3	....
Texas	125	154	65	82	2	7	58	65	80,153	61,623
West Virginia	24	23	4	8	14	11	6	4	24	20
Wyoming	2	1	2	1	..	..	..	..	246	640
Totals	333	370	166	195	40	51	127	124	121,803	101,268
Increase this week	..	..	..	..	..	..	3	..	20,535	....
Decrease this week	37	..	29	..	11	..	..	..	....	....

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
BECKHAM COUNTY—		
Magnolia Pet. Co., Martin 1, nw ne ne, 28-9n-23w	¶70	2726
CARTER COUNTY—		
Simpson & Fell, May Walker 4, se sw nw, 10-4s-2w	340	2196
Schermerhorn et al, Crockett 3, se sw nw, 23-1s-3w	230	2613
CREEK COUNTY—		
C. G. Tibbens Oil Co., Tiger 1, swc se, 27-15-8e	7	2478
Devonian Oil Co., Bigpond 6, swc nw sw, 36-15-7e	30	2600
Wilcox Oil & Gas Co., Kimble & Reading 3, sec ne nw, 18-14-10e	250	3426
Pioneer Pet. Co., Bucktrot 5A, nw sw ne, 24-17-10e	25	2454
Henry & Avers, Harris 3, csl se se, 12-17-10e	75	1908
Devonian Oil Co., Unallotted 2, c se nw, 4-18-12e	¶5	2060
Indep. Oil & Gas Co., Tahkaney 1, swc ne se, 7-19-9e	30	2910
The Prairie Oil & Gas Co., Kogee Washington 16, nwc se ne, 7-17-7e	*	2425
H. C. Wilson, Durant 1, nwc ne, 10-15-8e	*	3233
1, swc se, 3-15-8e	*	....
Irelan et al, Baker 1A, swc, 11-17-10e	*	2550
Dixie Drlg. Co., Pahcakney 1A, ne se nw, 28-18-11e	*	2550
Kennedy & Horner, Tiger 1, ne nw nw, 25-18-11e	*	2472
GRADY COUNTY—		
Noble & Westerfelt, Smith 5, nec se sw, 26-5n-8w	¶14	2440
JEFFERSON COUNTY—		
Sigler & McCall, Peniston 1, sec ne se sw, 17-7s-5w	75	806
KAY COUNTY—		
Martin et al, Buessing 2, c nw nw, 9-27-1e	*	848
Boucher & Marland Oil Co., Woods 1, nec se, 25-27-2w	*	3680
LOGAN COUNTY—		
Roxana Pet. Corp., Stephens 1, swc, 29-19-4w	127	6000
McINTOSH COUNTY—		
Western Natural Gas Co., Green 1, swc se, 17-11-17e	*	660
MUSKOGEE COUNTY—		
Hettick et al, Townlot 2, se ne sw, 6-14-19e	35	527
J. M. Foltz, Taylor 6, cnl se se, 28-15-17e	10	2090
Ransome et al, F. W. Cobb 2, csl sw sw, 33-14-19e	*	1535
J. S. Routt et al, J. Kelley 1, swc ne nw, 8-14-19e	*	759
Towner & Witt, Wade 1, sec nw se nw, 6-14-19e	*	827
S. Epperson et al, Townlot 1, sec nw, 6-14-19e	*	....
Crippy et al, Cobb 1, nec nw sw, 6-14-19e	*	554
C. D. Bradley, Young 1, nwc se, 14-15-19e	*	710
Duga et al, Robison 1, sec ne se, 36-15-18e	*	1390
D. L. T. Oil Co., Bruner 1, nwc ne nw nw, 16-15-18e	*	815
York Oil Co., Jobe 1, nwc se, 12-15-18e	*	1832
W. C. Newman, Corbray 1, sec, 3-15-15e	*	2215
OKFUSKEE COUNTY—		
Champlin Oil & Ref. Co., Washington 5, se nw se, 15-11-11e	447	3501
Henry & Avers, Buckley 3, swc se se sw, 12-12-11e	*	2600
OKMULGEE COUNTY—		
J. L. Nourse, Rowe 1A, sec ne nw, 20-15-14e	15	788
W. B. Pine, Eubanks 3, sec ne, 8-15-14e	¶5	1845
Billy-Gene Oil Co., M. Monday 1A, nec se, 19-13-14e	*	500
Annex Oil Co., Smith 1, se ne se, 27-14-15E	*	2245
J. Crider et al, Fee 1, sec sw ne, 20-16-12e	*	2550
OSAGE COUNTY—		
Devonian Oil Co., 1, sw se nw, 27-21-10e	15	1923
Silurian Oil Co., 2, nw se se, 12-23-11e	10	1550
Petroleum Drlg. Co., 22, se nw sw, 25-26-8e	10	1733
R. L. Berlin, 11, sw nw sw, 24-29-10e	*	1810
PAWNEE COUNTY—		
Fisher & Wallace, Weeks 3, nwc ne ne se, 30-20-9e	15	1110
Miller & Mooney, Bush 1, nwc, 21-20-10e	*	2220
PAYNE COUNTY—		
Magnolia Pet. Co., C. Walker 2, "B", sw ne sw, 8-19-5e	20	3067
POTTAWATOMIE COUNTY—		
Magnolia Pet. Co., Hembree 1, nwc se, 19-7-5e	600	4101
I .T. I. O. Co., Sullivan 2, nwc se, 25-7-3e	548	4180
SEMINOLE COUNTY—		
The Texas Co., Hotulke 1, nw sw nw, 23-7-6e	5620	4172
Reiter-Foster Corp., Bunyard 1, se nw sw, 14-7-6e	2765	4258
Magnolia Pet. Co., Cruse 4, ne se se, 2-7-6e	280	4198
Rhoades 6, nwc sw, 12-8-6e	75	4245
Hammond 5, se nw ne, 10-8-6e	450	4223
Sunray Oil Corp., Culley 3, ne se ne, 18-5-8e	612	2636
Gilcrease Oil Co., Reed 1, ne nw ne, 18-5-8e	475	2650
Anderson & Pritchard Culley 1, sw se ne, 18-5-8e	610	2663
La. Oil Ref. Co., Punluste 3, nw sw sw, 8-5-8e	1233	2748
Mid-Continent Pet. Corp., Fleet 11, sw c se, 7-5n-8e	510	2641
Fleet 7, nw se se, 7-5-8e	800	2605
Fleet 5, sw se se, 7-5-8e	500	2620
Westheimer & Daube, Millner 2, se c sw se se, 8-5n-8e	200	2449
Devonian Oil Co., Smith 1, sw nw ne, 12-8-6e	*	4784
Gypsy Oil Co., Sango 6, sw nw se, 1-9-5e	*	3610
STEPHENS COUNTY—		
Petroleum Producers Co., Brown 1, sw c nw sw nw, 7-2s-7w	133	1571
American Pipe Line Co., Bond 3, c w l nw sw, 7-2s-7w	285	1540
Wirt Franklin Pet. Corp., Fobb 2, c e l ne se, 12-2s-8w	200	1550
Medlin et al, Burke 3, ne c nw nw ne, 34-1s-8w	100	1680
Big Twelve Oil Co., Taliaferro 8, ne c se se sw, 27-1s-8w	60	1410
Harry Hanbury, Taliaferro 7, sw nw sw, 27-1s-8w	40	2200
TULSA COUNTY—		
Sheridan Oil Co., Morton 1A, sw c nw nw, 12-16-12e	*	2415
Glidden Oil Corp., Wray 1, sw c nw, 35-19-13e	*	2056

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Allison & Fitzwilliams, McGinnis 5, ne c, 9-27-6e	150	3144
CHASE COUNTY—		
Denman et al, Ewers 1, c nw se, 15-18-6e	*	1564
COWLEY COUNTY—		
Slick et al, Conrad 2, sw c nw, 19-32-3e	*	3515
DICKINSON COUNTY—		
Phillips Pet. Co., Cugler 1, se c nw, 11-14-4e	*	2218
GREENWOOD COUNTY—		
Simmons et al, Fankhouser 1, nec sw, 26-22-12e	*	1788
Polhamus et al, Gopher 1, sw c se sw, 35-25-10e	*	430
Cross & Gilliland Oil Co., Burton 2, c se se, 9-25-13e	*	1605
MARION COUNTY—		
Lariaux et al, Merrilatt 3, sw c se nw, 23-17-4e	185	2391
School 1, sw c nw nw nw, 23-17-4e	200	2351
Johnson et al, Thompson 1, sw c ne, 26-17-4e	40	2385
RUSSELL COUNTY—		
Wilcox Oil & Gas Co., Mermis 3, se c, 18-12-15w	200	3045
Streeter & Stearns, Gorham 1, sw c ne, 33-13-15w	*	3350
WOODSON COUNTY—		
Spencer & Rainey, Kimball 1, se c ne, 32-24-14e	*	1754

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
GREENE COUNTY—		
Carnegie Natural Gas Co., McNeely 1	*	....
J. J. VanVorheis, Johns 1	¶1½	....
Oscar Orndoff, Gallentine 1	*	..
Milliken & Hankinson, Unknown 1	¶1	....
ALLEGHENY COUNTY—		
Smith & Co., Bloom 2	¶½	....
Dunlap & Co., Dean 1	3	....
Chemical O. & G. Co., Campbell 2	*	....

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
CLARK COUNTY—		
W. C. McBride, Inc., Rush 29	*	1400
Bennett 1	*	1585
CRAWFORD COUNTY—		
Ohio Oil Co., Hipshire No. 3, tr 3	2	1556

"Swabs may come and swabs may go but the GUIBERSON goes on forever"

Swabbing came into its own—became popular instead of feared—when the only correct-principle swab,—the GUIBERSON,—entered the field. Since then swab after swab has come forth in competition—but our correct *and patented* principle has endured. Swabs come—and swabs fall by the wayside—but the GUIBERSON goes on forever. It *created* swabbing as a popular practice. It is doing the bulk of all swabbing being done.

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California Branch: 1506 Santa Fe Ave., Los Angeles
402 W. First St. TULSA | 321 Osage St. PONCA CITY | 506 Trust Bldg. NEWARK, O.

GUIBERSON
BETTER BE SAFE THAN SORRY

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
LEWIS COUNTY—		
Carnegie Nat. Gas Co., Hineman 1	*	....
Cartright 1	¶¼	4160
McCall Drilling Co., Bally 1	¶¼	4352
Stanley Run Gas Co., Propet 1	¶¼	4290
Standard Gas Co., Clarksburg Land Co. 2	¶1	....
CALHOUN COUNTY—		
Hope Nat. Gas Co., Boyles 1	15	....
Bert Crowley, Byrne 1	2	....
Hope Nat. Gas Co., Allison 1	*	....
BOONE COUNTY—		
Hope Nat. Gas Co., Canterbury 1	*	....
Shank Land Co., Fee 4	¶2	....
Owens Bottle Machine Co., Miller 2	¶2	....
KANAWHA COUNTY—		
Chartiers Oil Co., Haynes 1	¶4	....
United Carbon Co., Osborne 19	¶3	....
CABELL COUNTY—		
Aetna O. & G. Co., Reynolds 1	¶1	....
United Fuel Gas Co., Davis 1	¶¼	....
PLEASANTS COUNTY—		
Smith, Riggs & Co., Smith 4	2	....
Swingle Bros., Holdren 2	*	....
ROANE COUNTY—		
G. & C. Oil Co., Stockley 1	5	....
MARION COUNTY—		
Carnegie Nat. Gas Co., Grubb 1	1½	....
BRAXTON COUNTY—		
J. F. Pauley & Co., Clowser 2	¶1¼	....
RITCHIE COUNTY—		
Delta Oil Co., Goff 2	*	....
H. H. Coghwill & Co., McCullough 2	¶¼	....
Hope Const. & Ref. Co., Hill 3	¶1	....
J. F. Deem & Co., Baker 1	*	....

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
OHIO COUNTY—		
Creek Drilling Co., Bartlett Hrs. 11	25	....
Bartlett Hrs. 12	300	....
Bartlett Hrs. 13	200	....
Rex-Pyramid Oil Co., Lake-Ambrose 4	150	....
Wood Oil Co., Mary J. Elmore 27	30	....
Elmore 28	50	....
Taul 1	*	761
Smith 6	*	663
Leeper Oil Co., McKinley 3	20	....
Ohio Oil Co., Rhodes 1	15	....
Whitesville Oil Co., Askins 4	10	513
W. H. Ford, Holbrook-Wells 3	*	511
DAVIESS COUNTY—		
Miller & Damron, Tompkins 2	150	....
U. S. & W. Oil Synd., Fields 2	120	....
Leeper Oil Co., Barnett 4	25	....
Ohio Oil Co., Burton Hrs. 1	20	....
Cumberland Pet. Co., Neeley 1	¶2	1273
A. G. Brooks & Co., Hartford 1	*	1050
L. C. Young & Co., Sands 1	*	....
Weideman Oil Co., Simon 1	*	....
Cumberland Pet. Co., Gray 1	*	....
Jolly, Howard & Co., Riddle 1	*	....
HANCOCK COUNTY—		
Dave Duncan & Co., Rosenblatt 1	20	....
UNION COUNTY—		
W. R. Abbott & Co., Riggs 1	¶2	628
ALLEN COUNTY—		
Stumbo & Stumbo, Hinton 5	*	300

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
MONROE COUNTY—		
Sylvania Prod. Co., Kinsey 9	75	1660
NOBLE COUNTY—		
Way Wickens & Co., Wickens 1	1	....
Wickens 2	2	....
W. Hesson & Co., Bryam 2	1	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
PERRY COUNTY—		
J. W. Leonard, Allen 4	10	....
H. O. Burkharat & Co., Nelson 1	85	....
Wiser Oil Co., Clark 1	¶1½	....
William Cline & Co., Hull Pottery Co. 1	¶1¼	....
CUYAHOGA COUNTY—		
John Arthur, Bainbridge 1	30	....
Gage 1	*	....
George Beriswell, Ashley 2	60	....
Hultz & Kundtz, Eldred 2	¶1	....
HOCKING COUNTY—		
Gordon Oil Co., Brimmer 5	56	....
A. H. Squires & Co., Cobb-Bradley 17	6	....
Kachelmacher Est., Tracey Est. 29	17	....
ASHLAND COUNTY—		
Logan Gas Co., Balm 1	¶2¼	....
Kemrow Co., Fluke 1	¶1¾	....
COSHOCTON COUNTY—		
Logan Gas Co., Vanwinkle 1	143	3182
LICKING COUNTY—		
Kunsle & Co., Chaney 1, ¶1 and	7	....
WAYNE COUNTY—		
Ohio Fuel Gas Co., Stratton 1	¶¼	....
SUMMITT COUNTY—		
East Ohio Gas Co., Miller 1	¶¼	....
HOLMES COUNTY—		
Kemrow Co., Shuy 1	¶1½	....
MEIGS COUNTY—		
Cabin Oil Co., Rueter 1	¶½	....
MEDINA COUNTY—		
Ohio Fuel Gas Co., Mix 1	*	....

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
SENECA COUNTY—		
J. H. Murphy & Son, Swartzmiller 1	400	1504

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
PIKE COUNTY—		
Perry Andrews & Co., Ingler 1	*	1420

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
CAT CANYON—		
R. and G. Oil Co., W-1, 30-9-32	150	3120
GOLETA—		
Santa Barbara Oil Co., H-7	*	1235
KERN FRONT—		
California Star Oil Co., 6-40, 22-28-27	125	2565
LONG BEACH—		
Calif. Pet. Corp., H-K 8	100	5285
Chicksan Oil Co., E-1	2250	6571
Crown City Oil Co., G-2	600	6310
Cypress Pet. Co., Crest 3	1300	6100
General Pet. Corp., Clock 4	2200	6838
Graham-Loftus Oil Co., Acme 1	1600	5592
A. T. Jergins, M-15	2500	6105
Signal Gasoline Synd., No. 4, No. 7	1800	6065
Shell Co., Church 2	1300	5700
RINCON—		
Pan American Pet Co., Hobson Fee 4	600	3063
Hobson Fee 7	750	3170
ROUND MOUNTAIN—		
Honolulu Consolidated Oil Co., No. 55, 18-28-29	950	2125

MOUNTAIN STATES

WYOMING

Company, Well and Location	Initial Production Bbls.	Depth
SALT CREEK—		
Midwest Ref. Co., Midwest Oil Co., se 34-40-79	46	1180
SPINDLETOP—		
Spindletop Syn., 1, nw 5-29-81	200	1053

MONTANA

Company, Well and Location	Initial Production Bbls.	Depth
KEVIN-SUNBURST—		
Ohio Oil Co., Bruins 7, 10-35-2w	60	1657
Emmert 7, 15-35-2w	25	1536
Baker 15, 4-35-2w	30	1740
PONDERA—		
J. W. Elliott, nw 17-27-4w	10	1600
BANNATYNE—		
Fulton Pete Corp., Tibbets 1, 8-25-1e	*	....

COLORADO

Company, Well and Location	Initial Production Bbls.	Depth
FREMONT COUNTY—		
G. & L. Oil Co., Castantino 1, sw 3-19-70	100	1560

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY—		
W. R. Keever, Ezell B-3, 12-17-15	10	2129
Magna Prod. Co., Rowland 2, 14-17-14	120	2974
Dr. Rushing et al, Gregory 1, 11-17-14	4000	3208

LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
J. R. Bahan, Kilgore 1, 31-23-11	¶38	3062
Palmer Corp., Hodges B-10, 25-16-12	¶6	1879
OUACHITA PARISH—		
Southern Carbon Co., Fee 50, 18-19-4e	¶3½	2178
RICHLAND PARISH—		
W. C. Feazel, Noble 1, 36-16-5e	¶20	2465
WEBSTER PARISH—		
Arkansas Nat. Gas Co., Mitchell 1, 30-23-9	¶26	2688
Magnolia, Mitchell 1, 31-23-9	¶28	2664

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
EDGERLY—		
Wilson-Broach, Wilson 2	15	3740
LOCKPORT—		
Vacuum-Gulf, Farquahar 3	115	3775

TEXAS

GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BATSON—		
Paraffine Oil Co., Paraffine 72	*	1125
BLUE RIDGE—		
Gulf, Blakely B-11	1800	3780
H. R. Cullen, Lafferty 2	375	3650
Fort Bend Oil Co., Blakely C-2	300	2890
HULL—		
W. E. Byrd, Hankamer 3	30	1775
SOUTH LIBERTY—		
Sun Co., Mitchell 3	3000	3290
ORANGE—		
Orange Pet. Co., Winfree 6	50	3140
PIERCE JUNCTION—		
Gulf, H. M. Perry 1	550	5435
SPINDLE TOP—		
Sun & Navarro Oil Co., Prather 1	*	4575

TEXAS PANHANDLE

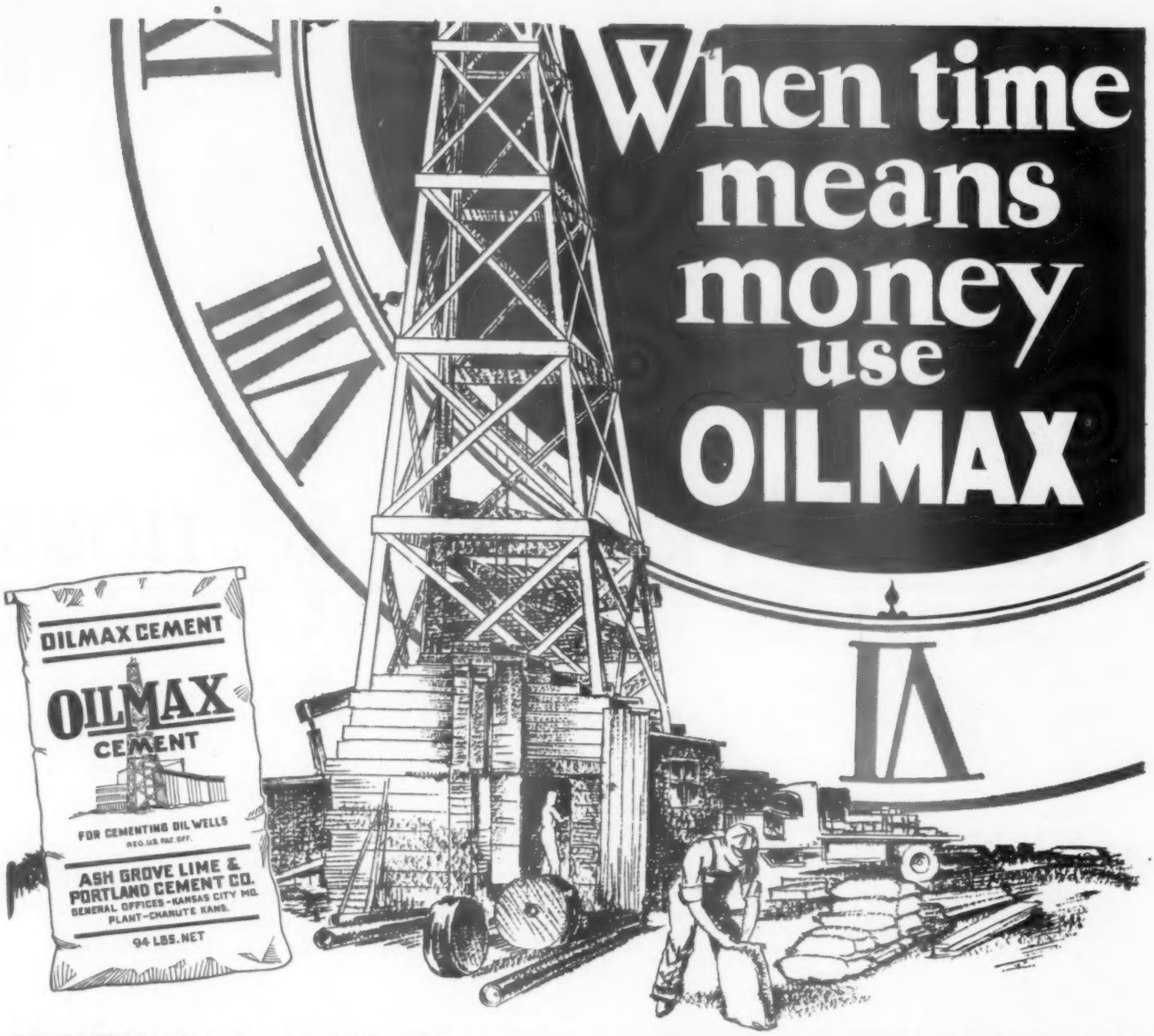
Company, Well and Location	Initial Production Bbls.	Depth
GRAY COUNTY—		
Pampa Oil Co., W. R. Campbell 1	*	3432
Ray & Plains Drilling Co., Chapman 1-B	*	2761

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
HOWARD COUNTY—		
Marland & Texon, Settles 3-A	*	1458
MITCHELL COUNTY—		
The California Co., Adams 8	80	3085
PECOS COUNTY—		
The California Co., Smith 1, Lease 2	*	1595
I. G. Yates 16	24,000	1367
Red Bank Oil Co., Smith 3	240	1722
WINKLER COUNTY—		
Atlantic Oil Prod. Co., Grisham-Hunter 1-C	9500	2978
Humble O. & R. Co., Grisham-Hunter 3	2000	2898
Grisham-Hunter 11	1800	2884
Landreth Prod. Corp., and Roxana, Ida Hendrick 5-A	10,000	2947
Ida Hendrick 6-A	3840	2985
Marland Prod. Co., T. G. Hendrick 3	8800	2759
Pure Oil Co., Grisham-Hunter 7-B	4700	2758
Grisham-Hunter 10-B	350	2759
Grisham-Hunter 12-B	680	2935
Roxana Pet. Corp., Grisham-Hunter 1-E	1000	2825
Ida Hendrick 4-B	700	3057
Ida Hendrick 5-B	1350	3000
Ida Hendrick 8-C	500	3022
Southern-Dixie Oil Co., Ida Hendrick 2-A-3-T-67	1100	3114

CENTRAL WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BROWN COUNTY—		
Anna Bell Oil Co., Hickman 2	20	1285
Bailey-Mitchell-Lowe, Lawson 1	*	1295
Planchard et al, Eubanks 1	*	1615
Bradstreet & Mahlstedt Oil Co., Eubanks 1	400	1228
Charter Oil Co., Byler 5	150	1340
H. P. Evans et al, Hale 1	*	646
Martin 1	*	978
Fulcher et al, Selvridge 1	*	1340
Gilman & McMurray, Hickman 3-A	25	1268
J. H. Green et al, Bull 1	*	1175
H. Gutzman et al, Stanley 2	8	432
Henshaw Oil Corp., Cross 2	125	1075
Jay Hawk Oil Co., Boysen 6	95	1236
Johnson et al, Lane 1	*	1145
King et al, Forbes 1	*	845
Pandem Oil Corp., Hutton 9	100	1177
Curry 5-B	*	1650
Sinclair & Smilock Pet. So., Henson 1	†	431
Wilson et al, Spain 1	*	1500
CALLAHAN COUNTY—		
O. P. Deener et al, McDonald 1	*	1252
L. A. Warren et al, Kelton 1	*	790
Robt. Watchorn et al, Finley 1	*	1010
COLEMAN COUNTY—		
Campbell & Empire, Sealy-Smith 1	*	2510
Cunningham et al, Jennings 1-B	110	1177
EASTLAND COUNTY—		
Fulcher et al, Woods 1	*	1640
Goodwin et al, Parker 1	¶18	3048
Root et al, Stokes 1	*	3700
SHACKELFORD COUNTY—		
Hope Pet. Co., Reynolds 12	15	1295
Roesser-Pendleton et al, Cook 17-C	†	704
Skelly Oil Co., Matthews 2-N	15	1185
Matthews 4-N	100	1180
L. B. Tannehill et al, Matthews 3, (Sec. 33)	*	1215
Matthews 4, (Sec. 33)	*	1189



WHEN a six to ten-day drilling delay means loss of production and holding up of high priced labor—that's when you need Oilmax Cement. And that's when it will prove its time and money-saving dependability.

You can resume drilling operations 48 hours after your casing has been set with Oilmax! It eliminates costly delays when used in shutting off water, straightening crooked holes, plugging back, cementing off lost tools, filling cave-ins or caves and all difficult bottom hole work. Because, used neat only, it gets as hard in 24 hours as Portland Cement in ten days—*and requires no admixtures or accelerators.* With a uniform mix, made easy because only water is added, weak or soft spots are eliminated.

Oilmax is specially compounded to set up normally in salt water or water containing oil, sodium chloride, magnesium chloride or calcium sulphate. But it is *not* quick setting. It takes its initial and final set just like Portland Cement, allowing ample time for mixing and placing, no matter how deep the hole.

Oilmax is a true Portland Cement, meeting all Govt. and A. S. T. M. specifications. It is unusually plastic, slips easily and quickly and works equally well in bailer and pump.

Available through dealers... You can secure Oilmax Cement through legitimate retail dealers. Packed in sturdy 5-ply paper bags, it may be shipped in mixed cars with Ash Grove Portland Cement or Quikard Cement. If your dealer doesn't stock it, write us for complete information.

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General Offices: KANSAS CITY, MO.
District Sales Office: OKLAHOMA CITY, OKLA.
Petroleum Bldg., Phone Maple 0642.

OILMAX CEMENT

19

Company, Well and Location	Initial Production Bbls.	Depth
STEPHENS COUNTY—		
Pace & Ward, Stokes 3	*	3389
Texas Fidelity Oil Corp., Cook 3	*	3245
Texas-La Power Co., Morton 3	*	1990
TP Coal & Oil Co., Binney 74	30	1815
NORTH TEXAS		
ARCHER COUNTY—		
Archer Drilling Co., Thompson 1	*	1650
L. T. Burns et al, Ikard 1	*	1503
F. H. Gohlke et al, Jones-Warren 2	55	1568
Humble O. & R. Co., Hamilton 1-A	30	1145
C. E. McCutcheon et al, Perkins 5	15	1028
F. P. Rose et al, Crawford 1-A	*	1350
Sun Oil Co., Anderws 1	*	1510
Tidal Oil Co., Turbeville 4-A	15	1457
United Producers Co., K. & K. 1	10	775
CLAY COUNTY—		
Ohio Mid-Cities Corp., Wright 1	*	1486
COOKE COUNTY—		
F. H. Lawson et al, McFadden 1	*	1381
Oil Operators Trust, Kleiss 1-A	15	1698
Simms Oil Co., Mitchell 1	*	1806

Company, Well and Location	Initial Production Bbls.	Depth
ELECTRA—		
Douglas Prod. Co., Douglas 2-B	20	1059
Douglas 3-B	8	1073
Douglas 4-B	7	1060
T. F. Hunter et al, Waggoner Bros. 33	*	1750
Red River Oil Co., Bywaters 94	*	397
The Texas Co., Waggoner 352	25	1733
JACK COUNTY—		
Panhandle Ref. Co., Daugherty 1	150	2967
K-M-A AND IOWA PARK—		
Coleman-Coppock et al, Watkins 1	*	897
F. E. Van Wormer et al, Fisher 10	*	871
MONTAGUE COUNTY—		
Arco Oil Co., Loy 5	15	817
Bridwell-Heydrick & Continental, Cunningham 1-A	25	1164
WILBARGER COUNTY—		
Fain-McGaha Oil Corp., Waggoner 2-S	540	2308
Harry Hines et al, Carter 1	*	2452
Murchison Oil Co., Fluhman 2	15	1489

Company, Well and Location	Initial Production Bbls.	Depth
Phillips Pet. Co., Waggoner 7-L	35	2388
Waggoner 1-RR	30	2385
Simms Oil Co., Waggoner 1	*	2701
Waggoner Ref. Co., Waggoner 3-E	700	2330
YOUNG COUNTY—		
Atlantic Oil Prod. Co. et al, Smith 1	*	602
Bullington-Lee & Pendleton, Boone 3	50	500
Byron et al, Edwards 1	*	867
Cunningham et al, Hawkins 8	20	528
Eureka Oil Co., State Fee 1	¶10	4380
Forbess et al, Washburn 1	*	778
Goldsmith et al, Petty-Miller 1	*	712
P. F. Gwynn et al, Kunkel 1-B	40	1157
Hammon & Garrett, Hunt 1	*	1205
Kleiner et al, Langston 7	25	590
Kruger et al, Johnston 1	*	903
Parker et al, Johnson 3	*	608
Pennell Oil Co., Boone 6	110	530
Boone 7	20	505
Riggs et al, McKinley 7	50	510
McKinley 8	295	583
Steed et al, Donald 1	*	1005
Whitehill Oil Corp., Drumm 1	*	650

WILDCATS FROM ALL SECTIONS

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
Completions		
BORDEN COUNTY—		
Marland Prod. Co., McDavid 1	*	3515
IRION COUNTY—		
P. E. Hill et al, Horney 1	*	1725

ANDREWS COUNTY—Deep Rock Oil Co.'s Harris 1, elev 3173 ft, top salt 1705 ft, making gas, co 2946 ft.

BORDEN COUNTY — Dixon Creek Co.'s Clayton-Jackson 1, elev 2606 ft, top lime 2940 ft, sd in water 3550 ft.

BREWSTER COUNTY—Cowden-Cole et al's Jackson-Harmon 1-A dr 175 ft. Wilcox & Anderson et al's Gage 1, elev 4320 ft, cmt cas 1500 ft, td 2100 ft.

CONCHO COUNTY—Douglas Oil Co. et al's Harrel 1, dr 305 ft. Sartain Oil Co.'s Evridge 1, sd 300 ft.

CRANE COUNTY — C. C. Duffey et al's Cowden 1, rig. Gulf's Waddell 4, dr 700 ft. J. K. Hughes Dev. Co.'s State Bank Fee 1, lcn. Humble's University 1-C, dr 320 ft. TP Coal & Oil Co.'s University 1, rig.

CROCKETT COUNTY—Geo. H. Anderson & P. H. Williams' University 1, elev 2610 ft, top salt 990 ft, top lime 2000 ft, sd 2008 ft. The California Co.'s Powell 1 and 2, rigs. Dixie Oil Co.'s Thompson 1, showing oil and water 1045-1130 ft, to plug back. W. W. Donnelly et al's Massie 1-A, dr 135 ft; Shannon 1-B, rig; Todd 1, show oil 820 and 861 ft, dr 871 ft. Gulf Prod. Co.'s Powell 3-D, rig; Thompson 1-A, fsh 268 ft. Grayburg Oil Co.'s Halff 8, top salt 475 ft, dr 890 ft. Henshaw & McMan O&G Co.'s Owens 1, elev 2769 ft, top salt 1140 ft, top lime 2055 ft, dr 4080 ft. Humble's Powell 4-B, rig. McMan & Amerada Pet. Corp.'s Powell 1, dk. Marland & Pecos Oil Co.'s University 1, dr 165 ft. Renee Oil Co.'s University 1, rig. Republic Prod. Co.'s Powell 1-B, dr 150 ft. W. R. Simmons & Marland Prod. Co.'s University 1, 2522 ft, top salt 875 ft, sd 1130 ft. Taylor-Link Oil Co. & Kirby's Powell 2, dr 840 ft; L. P. Peck 1, dk. Tidal Oil Co.'s University 1, rig. Transcontinental Oil Co.'s Atwood 1, sp. Whonlich & Co.'s Halff 1, show gas and sd, 880 ft. World Oil Co.'s Schneeman 1-B, elev 2663 ft, dr 2995 ft. F. P. Zoch et al's University 1, top salt 515 ft, dr 1060 ft.

CULBERSON COUNTY — Deep Rock Oil Co.'s Dettis 1, lcn. Dittman Drlg. Co.'s Miller 1, sd 1767 ft. J. M. Hickey et al's Finley 1, dr 1110 ft.

JEFF DAVIS COUNTY — Humble's C. Flores 1-A, elev 4239 ft, dr 4915 ft. Sam F. Means and G. M. Ball's J. Z. Means 1, fsh 2767 ft.

ECTOR COUNTY—Texas Co. & Cosden & Co.'s Connell 6, elev 2876 ft, top salt 950 ft, dr 2530 ft.

EL PASO COUNTY — C. E. Sillix et al's Malone 1, bad hole, sd 265 ft.

FISHER COUNTY — Cranfill-Reynolds & Sun Oil Co.'s T. Willingham 1, sp. R. W. Rainey et al's Marberry 2, elev 1929 ft, top lime 2995 ft, ur 3245 ft. Sinclair O&G Co.'s Steele 1, elev 1902 ft. ur 2735 ft.

GARZA COUNTY—Emerald Oil Co.'s J. M. Boren 3, elev 2363 ft, dr 3905 ft. Latimer & Waggoner's Cross 1, lcn. Marland Prod. Co.'s Pippen 1, dr 2675 ft.

GLASSCOCK COUNTY — Merriwether Oil Co.'s McDowell 2, elev 2522 ft, top salt 1000 ft, dr 2140 ft. Roxana's R. L. Bosteon 1, rig. World Oil Co.'s McDowell 1-B, rig.

TOM GREEN COUNTY — Tinker et al's Jones 1, spd and sd. Fitzgerald et al's Bennett 1, sd 1955 ft. P. H. McLaughlin & Ridge's Holder 1, dr 535 ft.

HOWARD COUNTY—Bristow & Merrick's Hooks 5, cmt cas 1574 ft; Roberts 1, elev 2757 ft, top lime 2086 ft, dr 2505 ft. Cosden & Co.'s Roberts 1-A, sp. W. W. Donnelly et al's Clay 1, spd and sd; Martin 1, dr 3239 ft. F-H-E Oil Co. et al's Roberts 4-A, sd for shot 1828-56 ft; Roberts 1-C, sd 1960 ft; Roberts 1-D, elev 2748 ft, top lime 2096 ft, comp, flowed 125 bbls per hour at 2950-83 ft; Roberts 3-D, elev 2765 ft, top lime 2105 ft, swab 65 bbls oil 2500-50 ft; Roberts 2-E, dr 2255 ft. Godley O&G Co.'s Hooks 3, dr 1495 ft. Gulf's Clay 1, rig. Greene O&R Co.'s Clay 1, sd 985 ft. Henshaw et al's Settles 1, sd hfo 2519 ft. Virgil Hicks et al's (was Marland) Read 1, spd and sd. Magnolia Pet. Co.'s H. Hyman 1, elev 2360 ft, sd 3185 ft; M. H. O'Daniels 2, lcn; Roberts 4, elev 2704 ft, co 1035 ft; Roberts 5, sd hfo 2550 ft; Roberts 7, elev 2769 ft, dr 1245 ft; Roberts 8, rig. Marland & Texon's Settles 2-A, dr 1070 ft. Mays-Nixon et al's Flowers 1, elev 2497 ft, sd 2517 ft. Owen-Sloan Oil Co.'s Roberts 4, elev 2744 ft, sd for machine 1990 ft. Pure Oil Co.'s Chalk 4, dr 1345 ft. Sun Oil Co.'s Settles 2, dr 1175 ft. Tate-Weekly & Tubbs' Roberts 4, elev 2739 ft, co 1894 ft. Bert Weekly et al's Roberts 1, plugging back from 3505 ft.

HUDSPETH COUNTY—Western States Oil Co.'s Gardner-Moseley 1, dr 2175 ft; S. W. Moore 1, cmt cas 1920 ft.

IRION COUNTY — B. A. Cline et al's Thompson 1, lcn. Kimbrough & Tuel's Nutt 1, dr 625 ft. L. P. Powell et al's Horney 1, co 320 ft. F. E. Webb et al's Nutt 1, elev 2354 ft, dr 1120 ft. West et al's Suggs 1, spd and sd.

JONES COUNTY—Hucony Gas Co. et al's Tiner 1, dr 2185 ft. Hurley Oil Co.'s W. L. Gunther 1, lcn. Phillips Pet. Co.'s Winters 6, dr 3065 ft. Roeser-Pendleton & Stebbins O&G Co.'s Higgs 2, spd and sd. Teas & Wheeler et al's H. Sayles 1, sd 1385 ft.

KENT COUNTY—J. S. Cosden & Co.'s Bilby 1, materials.

KING COUNTY—Humble's Pitchfork 1, fsh 4035 ft. The Texas Co.'s J. H. Johnson 1, dk.

LOVING COUNTY — Deleware Oil Co.'s Lockhart-Ramsey 1, top Deleware 4320 ft, co after shot 200 quarts 4312-58 ft, td 4426 ft. Lockhart & Bros. et al's Bowers-Wells 1, dk; Fee 1, sd 2400 ft; Lepp 2, elev 2651 ft, fsh 3895 ft. Hadlock Oil Co.'s Russell 2, co 810 ft.

LYNN COUNTY—Elpo Oil Co.'s Nevels 1, sd 2575 ft.

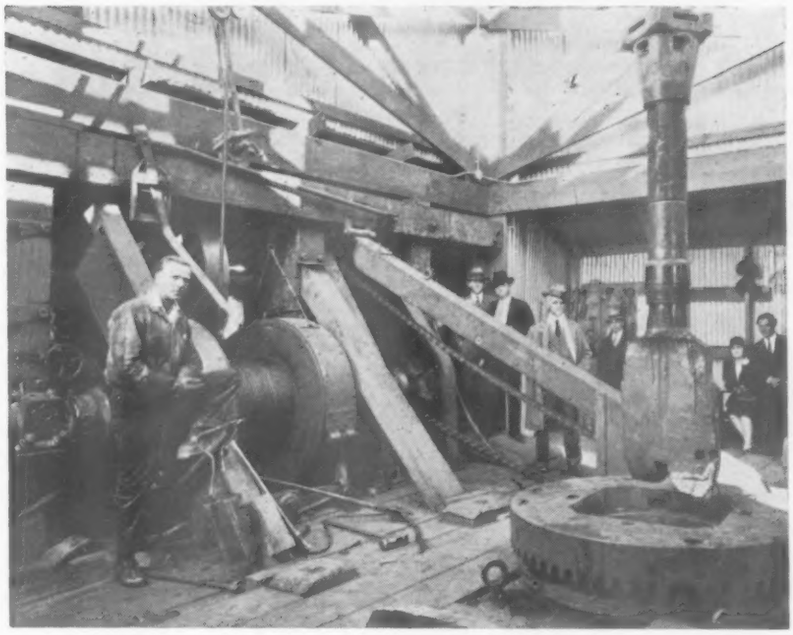
MARTIN COUNTY — Phillips Pet. Co.'s Slaughter 1, co 470 ft.

MENARD COUNTY—Carpenter & Robbins' Kothman 2, dr 620 ft. Moody Corp.'s Allison 1, elev 2053 ft, sd 1500 ft. Panhandle Ref. Co.'s Eckhardt 1, dr 245 ft. Renfro et al's Davis 1, sd 385 ft. Sabiens & Bevans' Wilhelm 1, spd and sd. Sorrells et al's Wilhelm 1, spd and sd.

MIDLAND COUNTY — Gholson et al's Moreland 1, sd 3510 ft. O. H. Shoup et al's Parks 1, elev 2871 ft, top salt 1700 ft, dr 1855 ft.

MITCHELL COUNTY — Owen-Sloan Oil Co.'s G. M. Boren 1, dr 525 ft.

PECOS COUNTY — Amerada Pet. Corp.'s Dillon 1, lcn. Geo. H. Anderson et al's University 1, elev 2801 ft, top salt 1030 ft, top lime 1715 ft, sd 1880 ft. Alexander & Lyles' Sellman 1, sp. Bateman & Price's Pecos River Bed 1, dr 125 ft. Benedum-Trees et al's Corder 1, co 525 ft. Buell-Hagan et al's Pryor 1, elev 2930 ft, top salt 1445 ft, sd 2508 ft. Diamond Pet. Co.'s Blackstone-Slaughter 1, sd 360 ft. M. Z. Dibble et al's Bonebrake 1, elev 2555 ft, sd 1170 ft. Ditto Oil Co.'s Montgomery 1, spd and sd. Bob Elmore et al's M. Holmes 2, elev 2150 ft, dr 1390 ft. Everett et al's Fields 1, sd 1015 ft. Furman Oil Co.'s McNear 1, lcn. Mays-Nixon Co.'s Perry 1, dk. McDonald & Stanley's Parsell 1, spd and sd. Mid-Kansas O&G Co.'s Pryor 1, elev 2790 ft, top salt 1465 ft, dr 3080 ft. Olean Pet. Co.'s Sherbino 1, elev 3027 ft, top salt 1173 ft, dr 1665 ft. Phillips Pet. Co.'s Heyman-Nutt 1, elev 2943 ft, dr 590 ft. Roxana & Kirby Pet. Co.'s University 1, elev 2620 ft, dr 1175 ft. Southern Crude Oil Purch. Co.'s Scharbauer 1, elev 2680 ft, dr hfw 1020 ft. B. J. Spikes et al's Brown 1, elev 2387 ft, sd 655 ft. Transcontinental Oil Co.'s University 1, elev 2543 ft, dr 2380 ft. Vacuum Oil Co.'s Elsinore 1, elev



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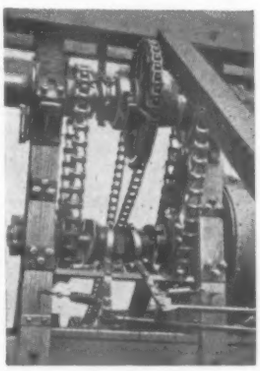
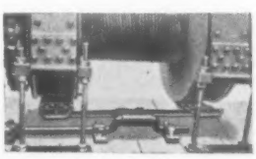
For Deep Well Drilling "Wherever There's Oil"



Showing Clutch Rigging for Intermediate and High Speeds.



Brake Equalizer is provided on three speed drum brakes. Patented.

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Are built to meet the most exacting requirements of deep well drilling, and are the result of many years' experience in the making of oil well drilling machinery. All parts are made of the best materials available, machined by competent mechanics, and are interchangeable.

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Posts are made of the best grade seasoned white oak, reinforced with steel. The Drum Shaft is forged of high grade tough steel, and is so made as to prevent the drum, which is cast directly around the shaft, from working loose—an exclusive patented feature.

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All sprockets are made of cast steel electrically annealed, and clutch sprockets are bronze bushed and readily lubricated. Clutches are made of the same grade of steel and fitted with circular throw-out straps. Clutch jaws are machine finished.

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Bearing Boxes are babbit lined and extra heavy, with large oil reservoirs in which oily waste may be packed as in railroad car boxes. Hinged covers keep out dirt and mud.

Operated from One Position—
Brake bands, operated with one lever, are made of one-quarter inch thick steel plate fitted with highest grade one-inch thick, continuous asbestos lining. All control levers are so arranged that the driller may operate the machinery from one position.

Time Tested—
Years of service "Wherever There's Oil" have proved the ruggedness and efficiency of operation of the Lucey Heavy Duty Draw Works. Constructed according to A. P. I. Specifications. Let us tell you more about them. Write for information.

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3554 ft, ur 2743 ft. World Oil Co.'s M. Cerf 1, elev 3435 ft, ur cas 3255 ft; Kloh 1, elev 2810 ft, ur 1310 ft.

PRESIDIO COUNTY—Empire G&F Co. & C. E. Miller's Tootle 1, dk.

REAGAN COUNTY—The California Co.'s University 4, elev 2895 ft, top salt 1340 ft, top lime 3030 ft, sd show oil and water 3093-98 ft. Mark Curtis & Moody Corp.'s Walters 1, spd and sd. Roxana Pet. Corp.'s University 1, top salt 1120 ft, dr 1680 ft. Skelly Oil Co. et al's University 2, elev 2918 ft, top salt 1340 ft, sd with oil and water in hole at 3139-58 ft. Texon Oil & Land Co.'s University-McBurnett 1, sp; University 1-B, re-bldg rig, td 8230 ft.

REEVES COUNTY—Explo. Co.'s Kinney 1, dr 2370 ft. Grisham-Hunter & Cosden & Co.'s Conner-Rathje 1, elev 2667 ft, top salt 1037 ft, set cas 3938 ft. McRobie et al's Bell 1, dr 415 ft. D. R. Thompson et al's Eddins 1, elev 2719 ft, sd 5499 ft.

RUNNELS COUNTY — Agnew & Fields' Russell 1, dr 935 ft. Gibson & Johnson's Serratt 1, plugging 3020 ft; Rainwater 1, rig. Hamilton et al's A. Spill 1, lcn. Henry B. May et al's Schneider 1, elev 1666 ft, dr 1780 ft. Marland Prod. Co.'s Russell 1, elev 1845 ft, co 2190 ft. Marland & E. L. Smith Oil Co.'s Herring 1-A, dr 1330 ft. Miles Oil Co.'s Lawhon 1, sd 2480 ft. R. B. Summers et al's Reese 1, dr 1105 ft. Swensodale Oil Co.'s Werner 1, dr 3165 ft. Vacuum Oil Co. et al's Flannagan 1, dr 315 ft; Fowler 1, elev 1706 ft, fsh 1570 ft. Robert Watchorn et al's King 1, elev 1660 ft, making gas, dr 3575 ft.

SCHLEICHER COUNTY — Long Bros. et al's Williams 1, rig.

SCURRY COUNTY — J. B. Mims et al's Koonsman 1, rig.

STERLING COUNTY—Manhattan Oil Co. et al's Ellwood 1, rig.

STONEWALL COUNTY — Henshaw Oil Corp. et al's Moore 1, dr 1490 ft.

TERRELL COUNTY—Champlin Ref. Co.'s Carter 1, elev 2884 ft, sd 2540 ft. Deep Rock Oil Co.'s Noelke 1, elev 2405 ft, top lime 1130 ft, dr 2460 ft. Humble O&R Co.'s University 1, elev 2284 ft, dr 3270 ft. Milham Corp.'s Bassett 1, elev 2270 ft, dr 2430 ft.

UPTON COUNTY—Atlantic Oil Prod. Co. et al's Elkins 1, elev 2741 ft, top salt 1590 ft, ur 2590 ft. Curtis-Hults et al's Giddings 2, sd 975 ft.

WARD COUNTY — E. H. Devore et al's Black 1, spd and sd. Estex Oil Co.'s Estes 1, top salt 645 ft, dr 1010 ft. Denver Prod. & Ref. Co.'s Cherokee Fee 1, dr 780 ft. Rector Oil Co.'s State Fee 1, spd and sd. Selby O&G Co. et al's Dooley-Rogers 1, elev 2661 ft, set cas 2646 ft.

WINKLER COUNTY—Amerada Pet. Corp.'s Walton 1, elev 2833 ft, making ¶50, fsh tools 2502 ft. V. T. Bolin & Co. et al's Brown 1, elev 2847 ft, top salt 1302 ft, dr 2710 ft. Danciger O&R Co. et al's Sealy 1, top salt 1085 ft, making water, dr 3170-3210 ft. Gibson-Johnson et al's Leck-Daugherty 1, elev 2883 ft, top salt 1980 ft, top lime 2687 ft, estimated 4000 bbls oil and ¶50, td 3167 ft. Humble O&R Co.'s Walton 1-B, dr 625 ft. Sid Richardson et al's Stockton Cattle Co. 1, rig. Southern & Westbrook's Hutchings 1-T-90, sdtrkng stem, td 2706 ft.

SOUTHWEST TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
DALE FIELD—		
The Texas Co., Osteen 6.....	75	2225
COLE FIELD—		
Magnolia, Valdez 1, Sec. 754, Webb County	500	2337

CALDWELL COUNTY—Datex Oil Co.'s August 1, Branyon district. Smith et al's Lancaster 1, Branyon district, dr 2250 ft. The Texas Co.'s Branyon 2, will put to pumping; Medford 1, Branyon district, dr 2243 ft. Davis et al's Young 1, Branyon district, ru. Dixon et al's Teas 1, Branyon district, dr 1950 ft, Taylor marl. Roxana's Medford 1, Branyon district, dr 1800 ft, Taylor marl. Weinert & Carter's Branyon 1, Branyon district, dr 2240 ft. United North & South Dev. Co.'s Branyon 1, Branyon district, ru. Joe Bruner et al's Wilson 1, will resume drilling. Radcliff et al's Briscoe 1, ne Luling, sd. United North & South's Tiller 2, Luling, dr 7298 ft, schist. Kelly 1, Luling, dr 7630 ft, schist.

DUVAL COUNTY—Edward St. Albans' Hyatt 1, dr 1825 ft. National Oil Co.'s Bell 1, sd 2175 ft, gumbo.

HIDALGO COUNTY—Dale Smith's Daskan 1, sd 3235 ft. Queen City O. & G. Co.'s American Land & Irrigation Co. 2, 3 miles n Mercedes, td 135 ft, gumbo.

JIM WELLS COUNTY—Cushing Oil Co.'s Perez 1, 3 miles n Alice, dr 1275 ft, shale.

KINNEY COUNTY—Stephens et al's Clamp 1, sd 1030 ft, shale and lime.

LIVE OAK COUNTY—Harper et al's Nichols 1, e Calihan, sd 1170 ft.

MAVERICK COUNTY—Rycade's Chittam 2, Eagle Pass, fsh 5330 ft. Ryan Consolidated's India Land Co. 1, 24 mi se Eagle Pass, prep to pull cas.

NUECES COUNTY—May et al's Gallagher 1, 12 mi w Corpus Christi, sd.

SAN PATRICIO COUNTY—Mission Drilling Co.'s Cage 3, sw Odem, lcn. National Oil Co.'s McMullen sur. 1, sd 2540 ft. Pardee Pet. Co.'s Bell 1, w Mathis, sd 2850 ft.

STARR COUNTY—The Texas Co.'s Guerra 1, dr 3390 ft, sandy shale.

VAL VERDE COUNTY—East Del Rio's Weatherbee 1, sd 3335 ft. Magnolia's Whitehead 1, dr 6700 ft, shale. Thraves et al's Wilson 1, sd 905 ft. Valvert Oil Co.'s Bassett 1, lcn.

LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
La. Oil Ref. Corp., Blanton 1, 23-23-12	*	3087
CADDO PARISH—		
Greenwood Prod. Co., Cooper & Ellerbe 1, 15-18-14	*	3234
Magnolia, Hampton A-8, 15-21-15 ..	*	4039
DE SOTO PARISH—		
Reliance Drlg. Co., Jones 1, 8-11-14.	*	3018

BIENVILLE PARISH—S. P. Borden's L. & A. 2, 1-15-8, dr 1750 ft. Humble O. & R. Co.'s Anderson 1, 29-18-5, dr 3140 ft.

BOSSIER PARISH—J. R. Bahan's Bolinger 1, 32-23-11, arr to deepen 2647 ft. R. L. Crook's Larkin 9, 14-19-11, lcn. Deleware-La. Dev. Co.'s Bolinger 4, 38-23-11, set 12-in at 300 ft. Doern et al's Bolinger 1, 9-22-11, sd 3900 ft. H. S. Goodwin Tr.'s Curtis 2, 36-17-13, sd 3257 ft; Curtis 3, 2-16-13, dr 250 ft. Wm. Gross et al's Hunter 5, 14-16-12, arr to set 6-in at 1898 ft; Stewart 1, 15-18-12, dr 2050 ft. Hamiter et al's Hamiter 1, 10-23-13, sd 1870 ft. D. D. Johnson's Caddo-Bossier I. I. Co. 2, 13-17-14, dr 1100 ft. J. S. McCullough's Hodges 6, 25-16-12, wosr 1548 ft. Nat. Gas & Prod. Co.'s U. S. Government 1, 31-23-11, testing 3069 ft. Northwest La. Gas Co.'s Bolinger 2, 38-23-11, arr to deepen 2675 ft. Olmeda Gas Co.'s Mayer 1, 30-16-11, set 6-in at 1824 ft. R. O. Roy's Werner 1, 7-17-11, lcn; Caplis 1, 25-16-12, set 12½-in at 35 ft. Sligo Synd.'s Skannal 2, 14-17-12, dr 1510 ft. Triangle Drlg. Co.'s Bulkley 1, 9-20-13, dr 2166 ft. Woodley Pet. Co.'s Whitehurst 1, ?-16-12, set 10-in at 100 ft. Walker et al's Antrim 1, 28-22-13, sd 2737 ft.

CADDO PARISH — Bayou State Oil Co.'s Jolly C-1, 27-22-15, tested sw at 2377 ft. Bee Oil Co.'s Muslow 1, 29-20-15, wosr 2292 ft. J. W. Burton Tr's Caldwell 8, 18-21-15, dk. Belchic & Lasky's Sharp 4, 10-18-14, dr 2300 ft; Sharp 5, 10-18-16, lcn. W. D. Chew's State 6, 34-21-16, dk. J. T. Cox's Hall 1, 7-15-16, sd 1107 ft. Dixie Oil Co.'s Robertshaw 81, 13-21-15, sd 4143 ft; Clark 9, 14-21-15, dr 3976 ft; Robertshaw 92, 13-21-15, drill stem stuck at 4382 ft; Huckaby 4, 11-21-15, sd 4037 ft. Dobson et al's Rives 7, 5-20-16, tested sw at 1925 ft. Empire G. & F. Co.'s Nicholson 1, 33-17-14, dr 3079 ft Greenwood Prod Co.'s Cushman & Bridges 1, 15-18-16, arr to deepen 912 ft. Wm. Gross et al's Baker 1, 35-17-16, tested sw at 1148 ft. Gulf's Tyson 12, 14-21-15, arr to deepen 3819 ft. Haynes Bros.' Spell 2, 15-21-15, cmtg cavity 3092 ft. Magnolia's Bell 2, 6-17-16, tested dry at 3225 ft; Dillon 18, 23-21-15, dk; Dillon 21, 23-21-15, lcn; Robertshaw 22, 23-21-15, coring 4049 ft. D. C. Richardson's Youree 6, 30-20-15, sd 2305 ft. Simms Oil Co.'s Glassell 1, 23-20-15, set 6⅝-in at 2206 ft. Simplex Oil Co.'s Baird 3, 22-20-15, tested show of oil at 2265 ft. Shreveport Oil Corp.'s Muslow 3, 32-21-15, dr 2000 ft. The Texas Co.'s C. M. L. 47, 23-21-15, arr to deepen 3657 ft.

CALDWELL PARISH—Greenwood Prod. Co.'s Caldwell L. & T. Co. 1, 27-13-5e, dr 1900 ft.

CATAHOULA PARISH—Leonard Pet. Co.'s Knott 1, 32-11-8e, dr 4315 ft. The Texas Co.'s Tensas Delta Lbr. Co. B-1, 4-10-6e, set 15½-in at 195 ft.

CLAIBORNE PARISH — El Dorado Chief Oil Co.'s Jones 1, 8-20-6w, dr 1900 ft.

DE SOTO PARISH — American Controlled Oil Co.'s Lanier 2, 5-11-11, sd 2800 ft. Gulf Ref. Co.'s Jenkins A-35, set 6⅝-in at 2363 ft. R. O. Roy's Lee 1, 33-14-13, dk. Williams et al's Fortson 2, 4-12-11, set 12½-in at 104 ft.

EAST CARROLL PARISH—Palmer Corp.'s O'Brien 1, 7-19-11e, set 6-in at 2347 ft. The Texas Co.'s Boone Live Oak 1, 11-20-12e, dr 1492 ft.

FRANKLIN PARISH—Pittsburgh O. & D. Co.'s Moore 3, 12-11-6e, sd 2501 ft.

GRANT PARISH—W. D. Ball et al's Calhoun 3, 9-7-4w, arr to test 950 ft. Swope et al's Fee 3, 18-9-1e, sd 1607 ft; Fee 5, 18-9-1e, wosr 1602 ft.

LA SALLE PARISH — Elbert Pet. Co.'s Hardtner & Tannehill 1, 34-11-2e, lcn. H. T. Taylor's Urania 6, 19-10-2e, dry at 1598 ft; Urania 7, 19-10-2e, dr 1200 ft.

MADISON PARISH—W. S. Smith's Yerger 1, 51-16-14e, sd 1700 ft.

MOREHOUSE PARISH—Elbert Pet. Co.'s Morehouse Plumbing Co. 1, 40-19-7e, dr 2142 ft Gulf Ref. Co.'s Higginbotham 1, 42-20-7e, dr 2225 ft; Weymond A-1, 7-18-6e, rig. Southern Carbon Co.'s Davis 1, 21-20-4e, rig. The Texas Co.'s Meyers 1, 15-22-7e, sd 2530 ft. United Carbon Co.'s Bastrop P. & P. Co. 1, 18-21-6e, tested sw at 2413 ft.

NATCHITOCHES PARISH — Lawson & Pharris' Crowell Lbr. Co. 1, 22-5-6w, sd 2758 ft.

OUACHITA PARISH — Imperial O. & G. Co.'s Stubbs 6, 14-19-3e, dk. Jordan Drlg. Co.'s Slagle 1, 48-18-4e, dk; Cole 1, 50-18-4e, set 8-in at 856 ft. Montgomery et al's Johnson 1, 30-19-4e, set 6-in at 2148 ft. Natural Gas & Fuel Corp.'s McEnery 1, 21-19-4e, rig. Ouachita Nat. Gas Co.'s Patton 1, 33-19-3e, dk. Phillips Pet. Co.'s School Fee 1, 16-16-4e, set 8-in at 820 ft. Palmer Corp.'s Cole 4, 26-20-4e, set 6-in at 2131 ft. Pioneer O. & G. Co.'s Nolan 1, 17-18-4e, rig. Southern Carbon Co.'s Fairbanks 9, 34-20-4e, dk. Joe White Tr.'s Schmidt 1, 3-15-4e, dr 2725 ft.

RAPIDES PARISH—Collins Bros.' Allen 1, 25-5-1w, sd 3010 ft. Glenmore Pet. Co.'s Fee 1, 1-2-2w, dr 3800 ft. Minnesota Oil Corp.'s Wettymark 2, 13-5-4w, tested sw at 2400 ft.

RICHLAND PARISH—Dixie Oil Co.'s McCoy 1, 29-16-6e, tested dry at 2454 ft. J. M. Fuller's Boise 1, 33-16-6e, lcn. Feazel & Hemler's Perdue et al 1, 21-16-6e, dr 1501 ft. Gulf's Millsaps 1, 8-17-6e, dr 3477 ft; Rhymes 3, 28-17-6e, dr 3262 ft. Moody & Seagrave's McDonald 1, 9-15-5e, dr 2713 ft; Sartor B-1, 9-16-6e, set 6-in at 2293 ft. Nat. G. & F. Corp.'s Sartor B-3, 19-16-6e, dk; Sartor B-4, 18-16-6e, lcn; Thomasson C-2, 21-16-6e, skidding dk; Thomasson C-3, 21-16-6e, pumping in mud to kill crater. Oliver & Master's Morrison 1, 2-15-5e, set 10-in at 810 ft; Hatch Heirs 1, 11-15-5e, set 10-in at 850 ft. Ruston Drlg. Co.'s Sartor B-1, 9-16-6e, dr 2300 ft; Alexander 1, 4-16-6e, lcn; Etheredge 1, 28-17-6e, lcn. Southern Carbon Co.'s Sartor 3, 18-16-6e, rig; Sartor Jr. B-1, 9-16-6e, set 6-in at 2280 ft. Woodley Pet. Co.'s Osborne 1, 3-17-7e, sd 3131 ft.

SABINE PARISH—Doern et al's Pickering 1, 17-4-11, sd 2025 ft. R. L. Gay's Mansfield 1, 15-7-14, dr 2496 ft. Magnolia Pet. Co.'s Hall 1, 33-10-12, set 8⅛-in at 3150 ft. The Texas Co.'s Hamlin Est. 1, 28-10-13, dr 2116 ft. Zwolle O. & G. Co.'s Bowman Hicks 7, 11-7-14, arr to set 4½-in at 3860 ft.

UNION PARISH—Carter et al's Hudson 1, 7-23-1e, sd 700 ft. Industrial Gas Co.'s Lewis 1, 14-20-3e, set 6-in at 2125 ft; Simpson 1, 9-20-3e, set 6-in at 2077 ft; Harris 1, 24-20-3e, rig. R. W. Rhodes' Upshaw 1, 14-23-2w, dk. United Carbon Co.'s Peak 1, 7-20-4e, lcn; Trimble 1, 19-20-4e, set 12½-in at 197 ft.

WEBSTER PARISH—Allison et al's Lewis 1, 15-21-10, dr 3230 ft. Dixie Oil Co.'s Cox 1, 15-21-10, sd 2600 ft. Humble O. & R. Co.'s Webb 2, 14-21-10, set 6-in at 4270 ft; Bodcaw A-2, 14-21-10, rig; Davis 6, 14-21-10, dr 3351 ft; Cox 3, 22-21-10, arr to set 15½-in at 463 ft. S. A. Lane's Miles 1, 24-17-9, sd 1469 ft. Louisiana Oil Ref. Corp.'s Lindsay 4, 22-21-10, set 8⅝-in at 3550 ft; Crichton 5, 21-21-10, dr 3350 ft; Davis 1, 23-21-10, tested ¶4 at 4700 ft.

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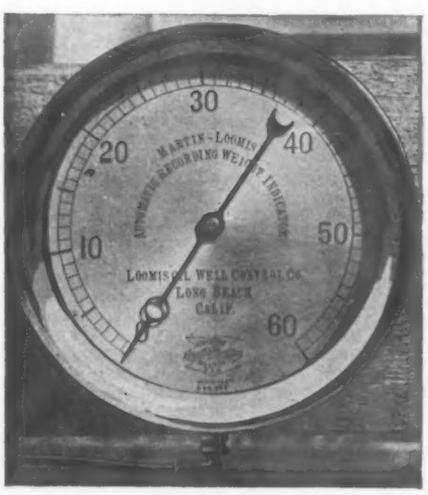

Weight gauge on derrick girt in easy view of driller. This gauge serves as a constant guide while drilling, fishing, or taking core, and eliminates the necessity of depending on the "feel" of the brake to determine the weight on bottom or on the hook.

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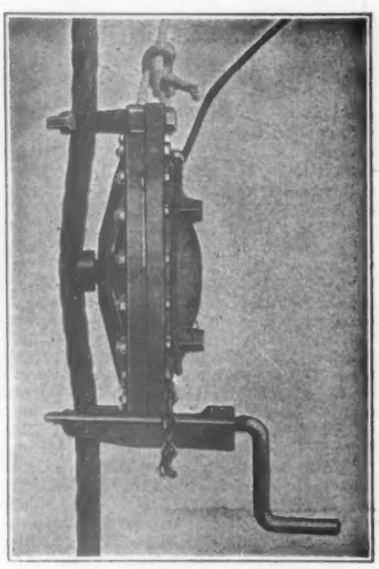

Bronze case containing rubber diaphragm attached to deadline.

C. H. Lyon's Porter-Wadley 2, 29-23-9, testing 2732 ft. Morris et al's Lewis 1, 15-23-9, sd 150 ft. Magnolia's Camp 1, 36-23-10, arr to deepen 2735 ft; Coyle 2, 21-21-10, set 16-in at 400 ft; Cook 1, 2-22-11, dk; Sexton 1, 32-23-9, set 13⅜-in at 318 ft; Mixon 1, 22-21-10, dr 4349 ft; Wise 1, 30-23-9, dk; Aarnes Cox 3, 22-21-10, dr 2861 ft; D. G. Cox 1, 22-21-10, recmtd at 4700 ft; W. Cox 5, 15-21-10, set 16-in at 400 ft; Merritt 5, 14-21-10, dk. Ohio Oil Co.'s Haynes 1, 30-23-9, lcn; Bodcaw 39, 15-21-10, dr 3123 ft; Bodcaw 40, 15-21-10, dr 2851 ft; Bodcaw 41, 15-21-10, dr 2489 ft; Hodges 2, 23-21-10, lcn; Holloway 3, 23-21-10, arr to deepen 4411 ft. Palmer Corp.'s Mixon 1, 22-21-10, set 8⅝-in at 3528 ft. Woodley Pet. Co.'s Duhe 2, 22-21-10, dk; Cox B-1, 23-21-10, tested ¶4 at 4695 ft.

WINN PARISH—Calvin Oil Co.'s Bodcaw 2, 9-11-4w, set 10-in at 60 ft. Roark et al's Southern Mineral Lands 4, 19-11-3w, set 15½-in at 42 ft.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
MILLER COUNTY—		
Dave Bruton, Red River Farm 1, 2-17-26	*	3409

ASHLEY COUNTY—South Arkansas Nat. Gas Co.'s Holmes 1, 9-16-7, lcn.

BRADLEY COUNTY—Joe Hurley's Southern Lbr. Co. 1, 26-15-10, set 10-in at 21 ft. Johnson & Adams Southern Lbr. Co. 1, 12-12-12, sd 3138 ft.

CLARK COUNTY — W. M. Henry Tr.'s Clark 1, 34-9-21, dr 1200 ft. McKenzie Oil Co.'s Eaken 1, 9-11-19, abnd 633 ft.

CHICOT COUNTY — Loe Crawford et al's Cashion 1, 14-18-2, rig.

COLUMBIA COUNTY — Geo. Dawley's Gantt 1, 12-17-22, sd 1925 ft. Mitchell et al's Franks 1, 25-19-22, sd 150 ft. Van Hagen Synd.'s Pickler 1, 19-19-12, sd 850 ft; Mason 1, 31-19-22, rig.

DALLAS COUNTY—Dedman et al's Hillman 1, 20-10-13, dr 1690 ft.

GRANT COUNTY—Jones et al's Meeks 1, 5-4-11, sd 1400 ft.

LINCOLN COUNTY—Pine Prairie O. & G. Co.'s Carter 1, 33-10-6, sd 2176 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-31, sd 2941 ft.

MILLER COUNTY—Lenze et al's Dale 3, 23-15-26, sd 3000 ft.

NEVADA COUNTY—Autrey Oil Co.'s Wells & Mays 1, 6-14-20, wosr 1188 ft. McDonald et al's Pelt 1, 9-15-22, plugged back to 2100 ft. J. J. O'Brien's Haynie B-5, 1-14-21, sd 1163 ft.

OUACHITA COUNTY — Buffalo Oil Co.'s Laughlin 1, 22-15-19, dk. Little Fay Oil Co.'s Robertson 7, 25-15-16, dr 1030 ft. Ohio Oil Co.'s Cramer 7, 22-15-16, r 3187 ft. Sinclair Oil Co.'s Berry A-7, 33-15-15, set 4½-in at 2640 ft. Skelly Oil Co.'s Umstead 10, 33-15-15, rig. Timberlake et al's Carnes 1, 27-13-17, coring 1510 ft. F. B. Woods' Tr.'s Spahr 1, 35-15-16, dr 2020 ft.

UNION COUNTY — Arkansas Drlg. Co.'s Carroll 1, 1-17-14, set 12½-in at 150 ft. O. W. Estes' Rowland 1, 14-17-14, set 6⅝-in at 2977 ft. Grimes Bros.' Hill 2, 7-18-14, rig. H. L. Hunt's Gregory 1, 10-17-14, rig. W. R. Keever's Ezell A-6, 12-17-15, set 10-in at 63 ft. Lion O. & R. Co.'s Hays 8, 4-16-15, set 6⅝-in at 2338 ft; Murphy G-7, 8-16-15, set 6⅝-in at 2466 ft; Murphy H-3, 9-16-15, dr 2440 ft; Rowland 1, 15-17-14, set 4¾-in at 3204 ft; Rowland 2, 15-17-14, rig; Kelly 1, 9-17-14 (formerly H. M. Johnson Tr.'s) rig. Lyall et al's Stegall 1, 11-17-13, sd 2740 ft. Magnolia Pet. Co.'s Carroll 2, 1-17-14, sd 1500 ft; Carroll 3, 1-17-14, dk; Laney 3, 8-16-16, dk; Laney 4, 8-16-16, dk. Mellon Tr.'s VanHook 1, 7-18-14, wosr 2206 ft; Bullock 1, 7-18-14, wosr 2169 ft. Mountz et al's Pratt 6, 8-18-15, wosr 2200 ft. C. E. Murdock's Gregory 2, 10-17-14, dr 3089 ft; Murphy 2, 17-16-15, sd 2117 ft. J. O. Moore Tr.'s Pagan 1, 18-18-11, arr to test 2650 ft. Magna Prod. Co.'s Dumas 2, 11-17-14, dk; Dumas 3, 11-17-14, rig. Ohio Oil Co.'s Crain 4, 1-17-14, dk; Pumphrey 2, 1-17-14, dr 260 ft; Goodwin 2, 2-17-14, sd 3054 ft; Adams 1, 11-17-14, rig; Lochnager 1, 11-17-14, lcn; Rowland 1, 15-17-14, dk; Smith 1, 1-17-14, dr 100 ft. Ouachita Nat. Gas Co.'s Perdue 1, 33-16-13, lcn. Pure Oil Co.'s Gregory 2, 11-17-14, set 10-in at 385 ft; Gregory 3, 11-17-14, set 6¾-in at 3132 ft; Gregory 4, 10-17-14, dr 200 ft; Gregory 5, 10-17-14, lcn; J. M. Gregory 1, 11-17-14, dk; Gregory Estate 1, 15-17-14, dk. Rhodes Tr.'s Union Saw Mill 1, 14-19-11, tested sw at 2794 ft. Rice et al's Heinieman & Meyers 1, 23-18-16, rig. Rovenger Oil Corp.'s Perdue A11, 10-17-14, set 10-in at 155 ft. Dr. Rushing et al's Gregory 2, 11-17-14, setting 6⅝-in at 3192 ft. Root Refining Co.'s Jerry 1, 21-17-14 (formerly Simon et al's) set 10-in at 92 ft. Simmons et al's Green 1, 3-16-16, rig. Timberlake et al's Dumas 1, 11-17-14, dr 650 ft. F. B. Wood Tr.'s Spahr 2, 34-15-16, set 10-in at 61 ft.

MOUNTAIN STATES

WYOMING

ALBANY—Union of Calif. 1, sw nw 33-17n-75w, dr 2000 ft.

BIG HORN—Agate Oil Co., ne 13-51-92, no report. Utah-Southern 3, 29-56n-97w, dr 3263 ft. Wisconsin-Himes, 9-54-94w, td 673 ft. Producers & Refiners 3, 24-56n-98w, dr 1806 ft. Assurance Oil Co., 1, 24-51n-93w, rig up. Prescott-Bert 3, 30-51n-92w, spd.

CARBON—Portland Dome Synd., 28-26-86w, sd 3600 ft. Graybeal Synd., 16-28-91, sd 4380 ft. Simpson Ridge Pet. Co., se 34-22n-80w, sd for repairs at 340 ft. Lake Valley Oil Co., se 14-20-88, resum 4915 ft. Pacific-American Oil Co., sw sw 32-25-89, spd and sd.

CONVERSE—Wind River O&G Co., ne 8-32-72, dr 500 ft. Criterion Oil Co., Irvine 1, 5-31-70, co 3597 ft. John Ackard, McKinley 1, 21-31-69, hauling in fuel to resume, 3000 ft.

FREMONT—Producers & Refiners, Muskrat 1, 34-34-92, dr 3460 ft. Texas Prod. Co., Alkali Butte 1, 1-34-95, run 6¼-in at 3242 ft. Iowa-Wyoming Inv. Co., 30-1s-2e, bottomed at 1500 ft. Martin Falk, ne 9-31n-98w, str hole at 2308 ft. R. A. Brett et al's Haywire 1, se 29-32n-93w, dr 1340 ft.

JOHNSON—Fairway Oil Co., Crazy Woman 1, 7-47-82, sd 2367 ft. Tarrant Synd., 17-46n-82w, sd 3615 ft.

LINCOLN—Fontenelle Oil Co., 1 ne ne 1-24n-113w, wait cas, td 1075 ft. Quad States Enterprise, Inc., 11-19n-116w, lcn. Midwest Explo. Co., Waterfall 1, sw 35-22-115, mvg in.

NATRONA—Combs Dev. Co., nw 12-39-78, sd 2016 ft. Combs Dev. Co., ne 12-39n-78w, repairing, td 660 ft. Shoshone Consolidated Oil Co., se 4-30-81, dr 200 ft.

NIOBRARA—Penn-West Pet. Co., 13-35n-62w, bottomed at 800 ft. Hollingsworth Bros., 17-39-79, fsh. Buck Creek Oil Co., 4-36n-62w, dr 700 ft.

PARK—Fred G. Ostland, Hoodoo Ranch 1, 23-51-101, sd 1740 ft. E. H. Rosenburg, ne 25-58n-98w, cav 1290 ft. Honolulu Oil Corp. and Producers & Refiners, Pitchfork 1, 14-48n-102w, mvg in. Ohio Oil Co., 27-53-101, co 3135 ft. Lenco Pet. Co., 20-52-102, sd 150 ft. Julius Peters et al, 17-57-101, lcn. Ydoc Pet. Co., ne 6-51n-101w, sd, will drill another well. California Exploration Co., ne 14-48n-102w, mvg in.

PLATTE — Walter Adams, Tr., 13-25-66, dr 2000 ft.

SUBLETTE—Wyo. Prod. Co., se 30-28n-113 w, dr 1905 ft. California Co., 11-29n-115w, sp. Lackey et al, 12-28n-114w, redr 400 ft.

SWEETWATER — Prairie O. & G. Co., Tucker 1, 18-13-99, fsh tools at 698 ft. P. & R-Marland of Colo., 26-20-104, dr 1150 ft. Tower Pet. Co., 1, 6-14n-103w, crooked hole at 1322 ft. Custer Pet. Co., 24-12-100, dr 1975 ft, gas encountered.

UINTA—Uinta O. & Dev. Co., 21-51n-120w, casing trouble at 2300 ft. Evanston O. & G. Co., 17-15-120, resum, td 2200 ft. California Co., 7-17n-116w, water so at 235 ft. Olsen Bros., se 6-15-118, sd 2275 ft. J. R. Kelley et al, 12-14-18, lcn. Minton et al, 8-18-116, dr 450 ft. P. L. Cooper et al, 10-16-118, resuming. Marlmsbury et al, DeLoney 1, 26-14-118, mvg in. Brigman et al, 12-15-118, dr 1504 ft. Whitman et al, 18-16-117, dr. Mosey Kastor et al, secs 7 and 19-16-117, rigs mvg in. Chas. DeLoney 5-16-117, lcn.

WESTON—Gose Synd., ne 29-47n-65w, will resume with rotary cutter. Allen Oil Co., Howard 1, 15-44-64, dr 1400 ft.

UTAH

DUCHESNE—Midwest Explo. Co. & Utah Southern Oil Co., Earley 1, 13-4-6, cmtd at 4030 ft.

CARBON—Price River Pet. Co., 1, se 16-14s-10e, dr 2685 ft.

GRAND—Utah Oil Ref., Moab Consolidated, Utah Southern, Salt Valley 1, 13-23-21, ready to spud. Utah Southern & Moab Consolidated, Shafer 1, 36-26-20; dr 1085 ft. Navajo Petroleum Co., 2-20-21, rigging up.

MILLARD—Beaver Valley Oil Co., Blackrock 1, 20-25s-9w, dr 3180 ft., carrying 4¼-in.

NAVAJO RESERVATION—Continental Oil Co., Boundary Butte 1, 31-43-21, dr 4040 ft.

SAN JUAN—Union Oil Co., of Calif., 40 mis. se of Moab, sptg lcn. Boulder Knoll O&G Co., 1, 17-34-25, dr 2250 ft.

UINTAH—Western Venture Oil Co., Krumvieda 1, 6-5-21, run cas 753 ft. Maude Ellen Oil Co., 28-3-21, dr 1000 ft.

UTAH—Diamond Oil Co., No. 3, ne 28-8s-4e, sd for repairs.

WAYNE—Texas Prod. Co., Shipley 1, 5-27-14, fsh 2975 ft. Phillips Pet. Corp., 16-27-16, sp below 150 ft.

WASHINGTON—Ora L. Hiatt et al, ne 30-43-14w, dr 420 ft. Mid-American Oil Co., nw 17-43-15w, dr 1500 ft. Uzona Oil Co., se 17-43s-15w, susp 390 ft. Uzona Oil Co., 1A, 19-43s- 15w, spd and sd. C. E. Cline et al, 2, 27-41s-12w, will resume at 275 ft. C. E. Cline et al, 3, 23-41s-21e, plugged back from 558 ft to 350 ft ad shot. Virgin Pet. Corp., 2, ne 23-41s-12w, water intrusion 1557 ft. Zion Oil & Ref. Corp., 3, sw 13-41s-12w, sd 756 ft. Miller & Taylor, nw 23-41s-12w, dr 150 ft.

MONTANA

BIG HORN—Selig Oil Co., 1, se 21-6s-35, rigging to resume at 850 ft.

CARBON—Ohio Oil Co., Northern Pacific 1, 11-7s-21e, dr 4410 ft. Atlantic Oil Co., 3, 20-7s-24e, dr 1470 ft.

CASCADE—Lone Star, McLean 1, 12-21n-11e, sd 300 ft.

CUSTER — Montana Belle, 28-8-45, no report.

FERGUS—Melton Corp., Fenholt 1, 24-21-17, cleaning out at 2390 ft. Mineral Research Co., 1, 13-17-23, susp 930 ft. DeMont Oil Co., 29-16-29, ur td 1185 ft. Minnesota-Flatwillow Petroleum Co., se sw 5-12-25, mvg in.

GARFIELD—Carroll Bros., nw ne 6-14n-31e, stndg cmtd 1440 ft.

HILL—California Interests, sw 15-30-13e, resum at 100 ft. Jones Oil Co., Mangell 2, 32-32-14, dr 350 ft.

LIBERTY—Bear's Den Oil Co., Laid 1, 31-37n-6e, dr 3185 ft. Sunburst O. & R. Co., Disotell 1, 10-37-5e, testing.

MUSSELSHELL — Manhattan Oil Co., ne 24-7-24e, sd 60 ft. McElwain Oil Dev. Assn., 2-11-22, rig.

RICHLAND—Community Drill Co., Pioneer 1, se 35-27-51n, dr 3182 ft.

PONDERA—Claggett Dev. Co., 8-27-4, dr 1600 ft. Texas Pacific Coal & Oil Co., Hirshberg 1, sw 14-27-4w, dr 250 ft. Continental Dev. Co., Gjullin 1, nw 15-27-4w, dr 200 ft.

PHILLIPS—Big Dome Oil Co., Bloomberg 1, ne 1-32-32e, resuming 980 ft. Dillman & Stephenson sw 8-31n-34e, delayed by fsh job, no dr 750 ft.

SWEETGRASS—Shoshone Consolidated, ne 23-2n-15w, dr 2545 ft.

TETON—Craig-Speer-McCutcheon, 9-23-2w, fsh 1400 ft. Continental Dev. Co., Ritmoure 1, 8-27-5w, dr 2520 ft. Hardrock Oil Co., 1, 5-25-1e, shot at 1507 ft. Crockner et al, se 2-24-1s, sd 600 ft. Fulton Pet. Corp., Tibbets 1, ne 8-25-1e, compl 1500 ft. Elkhorn O. & G. Co., 1, ne 12-24-1e, dr 250 ft.

TOOLE—Sunburst O. & R. Co., Grandview 1, 10-34n-32, rig. Madeline Oil Co., Swenson 1, 33-35-4w, dr 1785 ft. Western Nat. Gas Co., Pitchard 1, 3-37-2e, dr 2300 ft.

WIBAUX—Johns & Hagan, sw 15-11n-57e, resumed at 700 ft.

COLORADO

ARCHULETA — Kansas-Colorado Oil Co., 17-34-2w; sd 1300 ft.

BACA—Marland Oil Co., Table Mesa 1, 8-30s-50w, dr 400 ft.

EL PASO—Grand Union Oil Co., John Jr. 2, 19-17s-67w, sd 775 ft.

ELBERT—Botts, Likkick et al, se 1-8s-59, dr 1800 ft.

WHITLOCK Drilling Cable is not only high grade *ALL*-Manila, but laid with extreme care in the most approved manner for cable *service*. Properly lubricated —not loaded.

F-R Bull Rope
Same Quality
for ten years
Made by
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West of the Mississippi, Stores Everywhere

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1000 feet—11" hole 40 hours—cost 3c per foot

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STRAIGHT HOLE
Rotary Drilling Bit

—made this speed and low cost record. A 1000 feet of 11" hole in 40 hours, passing another well by 100 feet that was started 5 days previously, is the record made by the Klingensmith Drilling Company at Pearson Switch, Okla., with three sets of K-P self-sharpening cutters in a K-P *Straight Hole Bit. This thousand feet cost Klingensmith only* $30.00 *for K-P self-sharpening cutters.* The total footage was made in three round trips.

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Sold by every
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Supply Company Branch Store.

JACKSON—North Park Oil Co., Goettler 1, 9-6n-82w, co 506 ft.

JEFFERSON — Wood et al, 1, 30-3s-69, dr 1125 ft.

LAS ANIMAS — Reiter-Foster & Phillips Pet., 23-29n-56, dr 1835 ft.

LA PLATA—Detroit Oil Ass'n, Olbert 1, 9-35-12w, sd 1610 ft.

LOGAN — Northeastern Colorado Oil Co., State 1, 36-8n-55w, dr 5600 ft.

MESA—Eureka Oil Co., Holly 2, 24-1s-1e, dr 925 ft.

MOFFAT—Ohio Oil Co., Kuykendall 1, 22-21n-11w, sd for winter. Reiter-Foster, State 1, 16-12-100, sd 2240 ft. Yartg Producing & Re. fining Co., 205, 26-4n-92w, oil showing, set cas-casing 3737 ft. Alliance Oil Co., Milliken 1, 14-4n-92w, dr 3135 ft.

RIO BLANCO—Texas Prod. Co., Freeman 1, 27-3-94, dr 5580 ft. Argo Oil Co., sw 9-2s-96w, stndg ready to spud.

ROUTT—Great Western Oil Co., State 1, 17-60n-56w, dr 2504 ft.

WELD—Platte Valley Pet. Corp., Patterson 1, 24-6n-61w, stndg 3811 ft.

YUMA — Etmyre Snd., se sw 7-2s-43, dr 377 ft.

NEW MEXICO

CHAVES — Buffalo-Roswell 1, 24-11-27, sd 4290 ft. McQuigg Bros., Neis 1, 7-5s-29e, dr 1770 ft. Berrendo O. & G. Co., Roswell 1, 5-10-27, sd 725 ft. Manhattan Oil Co., Arena 1, 18-13-31e, repairing 3725 ft. Snowden & Mc-Sweeney, Merchant 1, nw 27-15s-23e, sp. R. T. Neal et al, Russel 1, 21-14s-25e, spd 170 ft.

CURRY—Hasson Pet. Co., Laird 1, 22-8s-36, spd and sd.

DE BACA—Matador Oil Co., State 1, sw 6-4n-20e, spd 225 ft.

GUADALUPE—Hanchett Oil Co., Ruther-ford 1, 24-8-21, crooked hole 4355 ft.

LEA—Midwest Ref. Co., State 1, 9-19s-39e, dr 3225 ft. Marland Oil Co., Eaves 1, 19-26-37, gassing 2916 ft. Marland Oil Co., Seide-man 1, 4-25s-36e, dr 2750 ft. Marland Oil Co., Robert 1, 20-23s-35e, dr 1675 ft. Marland Oil Co., Sholes 1, 19-25s-37e, dr 415 ft. Empire Gas & Fuel Co., State 1, 8-21s-35e, dr 900 ft. Gypsy Oil Co., State 1, 34-21s-36e, dr 850 ft.

McKINLEY—Smart & Reid, 7-17-9, rig. In-land Oil Corp., 22-18-10, installing heavier rig. S Dysart 1, 21-14-9, sd 1650 ft. Williams et al, 30-18-8w, sd 1795 ft. Reliance Oil Co., Val-entine 1, 16-17-9, dr 1558 ft.

QUAY—Gibson Oil Corp., 1, 25-8-32, prep to deepen.

SAN JUAN—Continental Oil Co., Munoz 17, dr 5100 ft. Kansas-Colorado Oil Co., Atter-berry 1, 23-31-11, sd 1850 ft. T. C. N. Oil Co., Lanier 1, 9-29-11, sd 547 ft. Huntington Park Oil Co., 29-30-9, waiting smaller tools, td 4585 ft. Fidelity Oil Co., Abrams 2, 23-29-11, stndg 667 ft. Huerfano Oil Co., Wiltbank 1, 25-29-11, stndg 800 ft. San Juan Pet. Co., 1, 9-29-13w, dr 2950 ft. Poole & Peebles, Law-son 1, 9-30n-11w, dr below 745 ft. Co-Ne-Mo 1, 28-29-11, waiting for casing. Kirtland Drlg. Co., Hunt 1, 10-29-15, spd new hole 100 ft. Kutz Canon Oil & Gas Co., Day 1, 29-28-10w td 270 ft, waiting for repairs. Fidelity Oil Co., James 1, nw 23-29-11w, sd 225 ft.

SAN MIGUEL—E. Adams et al, Deason 1, 14-15n-16e, co 1235 ft.

SOCORRO—Abo Oil Co., 1a, 14-3s-6e, set 12¼-in at 600 ft and sd.

TORRANCE—Duran Dome Oil Co., 1, 31-2-14, sd 1600 ft. F. G. Wilson, Trustee, Pace 1, 12-6n-27, stndg 2215 ft. Bluhall O. & G. Co., 20-6n-10e, sd 854 ft, waiting cable. San Juan Coal & Oil Co., Randall 2, 26-6e-10e, sd 5323 ft, tools lost.

VALENCIA — Acme Oil Co., N. M.-Ariz. Land Co., 26-6-3, dr 2455 ft.

NORTHERN CALIFORNIA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
SAN LUIS OBISPO COUNTY—		
Arroyo Grande Oil Co., 1, 21-32-13	*	4385

KERN COUNTY

BAKERSFIELD — Jackson and Chamber-lain's 1, 19-29-8, dr shale 530 ft. Pacific East-ern Prod. Co.'s KCL 1, 6-30-28, sd 5640 ft; KCL 2, 6-30-28, testing above plug at 4310 ft, td 4500 ft.

BELRIDGE—Zurich Oil Co.'s 1, 18-28-22, fsh 2790 ft.

BUTTONWILLOW—McAdams Trustee's 1,

HOUSTON STOCK

FORGED STEEL

Edward Globe Valve, Figure 680

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FORGED STEEL FLANGES
FORGED STEEL FITTINGS
CAST STEEL FITTINGS
NEILAN REGULATING DEVICES
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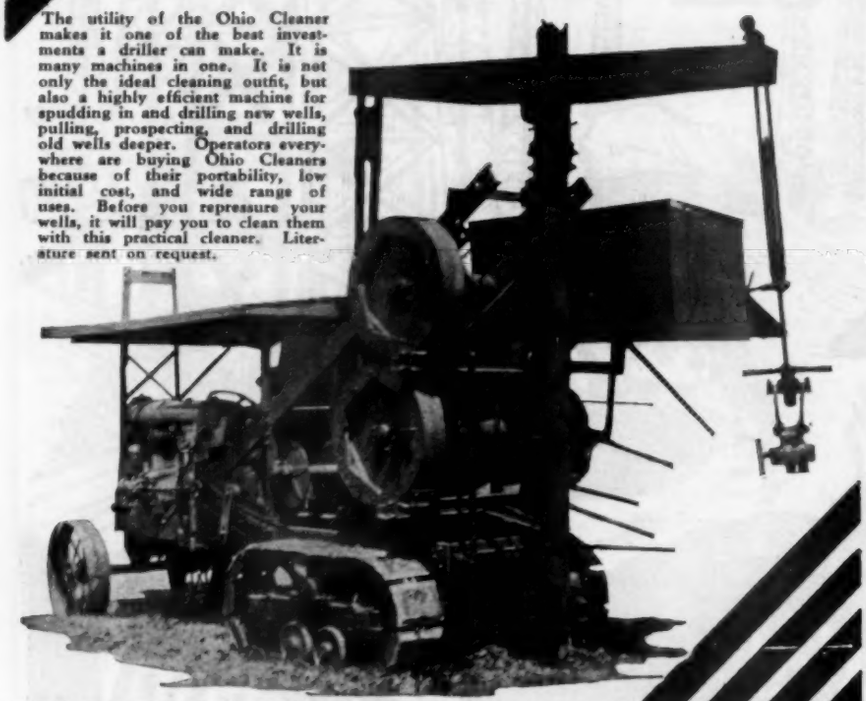

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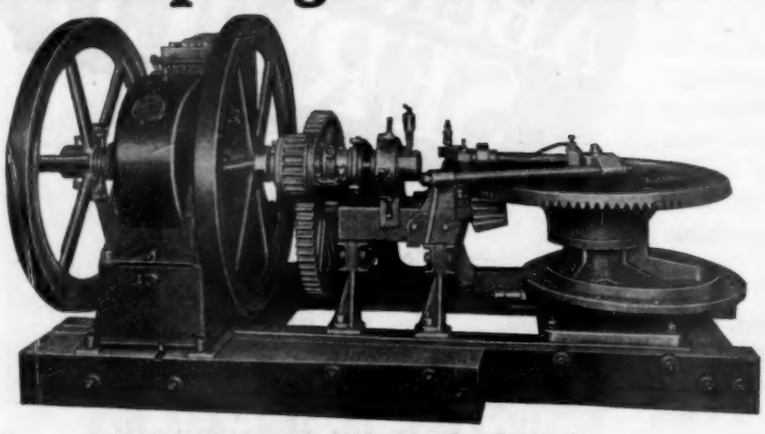

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Main Eccentric Shaft 4½" Dia. Hub Bearing 17" Long.

FULL AUTOMATIC POSITIVE LUBRICATION

Equipped 12 h. p. Stover Engine, Madison-Kipp Lubricator, or without engine, especially built for electric motor drive. Double gear reduction. No Counter shaft required.

Also—Lightning Beam Hangers, Pumping Jacks, Swings, Stuffing Boxes, Etc.

KANSAS CITY HAY PRESS CO., Kansas City, Mo.

26-29-23, failed on test at 4655 ft, plugged back from 5955 ft. Southern Calif. Gas Co.'s 1, 4-28-23, sdtr liner 2830 ft; No. 2, 10-28-23, bldg rig.

COMANCHE POINT—W. W. Stabler's 1, 23-32-29, dr shale 2490 ft.

DELANO—North American Consolidated Oil Co.'s 1, 5-25-25, dr gray sand 5750 ft.

DEVILS DEN—No active operations in this district.

EDISON—General Pet. Corp.'s Kerwin 1, 5-30-29, dr shale 5175 ft. Midway Northern Oil Co.'s 1, 29-29-30, oil showings 3340 ft, td 3350 ft.

GREENFIELD—J. E. O'Donnell's Houghton 1, 31-30-28, dr 4076 ft.

GOULD HILLS—Bomke and Ball's Larson 1, 91-29-20, fsh for bailer 1600 ft. Cymric Oil Co.'s Porter 2, 36-28-20, rigging up. Exeter Oil Co.'s 1, 1-29-20, dr shale 926 ft. Myrtle E. Oil Co.'s 1, 8-29-21, co 930 ft. H. Robinett's 1, 2-29-20, dr br shale 526 ft.

McFARLAND—General Pet. Corp.'s 1, 35-25-25, rigging up.

McKITTRICK—No active operations in this area.

SHALE HILLS—All wells sd in this district.

SHAFTER—M. McVey's 1, 8-28-25, rigging up.

TEHACHAPI—B own Hammond's 1, 14-11-9, rigging up. Crusaders Oil Co.'s 1, 21-10-10, liner pulled from 2370 ft.

WASCO—Main Oil Co.'s 2, 28-27-24, plugged to 4320 ft.

SANTA BARBARA COUNTY

GOLETA — Barnsdall's Edwards 2, 1-4-30, prod some oil and gas, td 2455 ft. J. J. Rekar's Pa Patera 1, 8-4-29, sd 2180 ft.

SANTA BARBARA — Channell O. & Dev. Co.'s 1, 29-4-27, cmt 4¼-in cas 5490 ft, td 6025 ft. Tepusquet Oil Co.'s 1, 3-9-32, dr shale 2150 ft. Pet. Explo. Co.'s 1, 20-4-27, dr hard sand 3870 ft.

SUMMERLAND — Summerland Oil Co.'s Becker 1, 22-4-26, t ying for water shutoff, td 3045 ft.

VENTURA COUNTY

BARDSDALE—Triple A Investment Co.'s Elkins 1, 5-3-19, fsh for dr pipe 2275 ft.

CAMARILLO—American Oil Co.'s 1, 33-2-20, dr 165 ft.

OJAI — Continental Oil Co.'s 1, 21-4-22, dr 175 ft. Bradford and Geis' 2, 22-4-22, dr 100 ft.

OXNARD—Shell's Grub 1, 22-2-22, dr shale 1330 ft.

PIRU—Petroleum Securities Co.'s 1, 26-5-19, failed to produce on pump, td 4565 ft.

RINCON—Scott Petroleum Co.'s 1, 35-4-25, dr 4280 ft.

RED MOUNTAIN — Miley Explo. Co.'s Casitas 2, 7-3-23, repairing rig, td 755 ft.

SATICOY—Standard's Farro 1, 11-2-22, dr shale 1350 ft; Schneider 1, 10-2-22, dr shale 972 ft.

SIMI—Shell's Berylwood 1, 32-3-20, 5¾-in cas cmt 7185 ft; Strathern 1, 6-2-18, co 4115 ft, td 4735 ft.

SOUTH MOUNTAIN — Ring Pet. Corp.'s C-1, oil and gas showings 4120 ft.

MISCELLANEOUS

COLOUSA COUNTY — Colus Oil Co.'s 1, 36-2-1, dr hard sand 2095 ft.

KINGS COUNTY—Milham Explo. Co.'s Elliott 1, 2-22-17, fsh for dr pipe, td 7236 ft.

MADERA COUNTY—Fort Wayne-Madera Synd.'s 1A, 22-10-17, rig.

MERCED COUNTY—K. L. Kuhn's 1, 9-12-9, d shale 1293 ft.

MONTEREY COUNTY—Marland's N-1, 32-23-11, sdtr d pipe 2795 ft.

SAN LUIS OBISPO COUNTY — Arroyo G ande Oil Co.'s 1, 21-32-13, abn 4385 ft. Indian Dome Oil Co.'s Edna 1, 25-31-12, deepening from 2690 ft. Delaney Oil Co.'s 1, 32-31-13, co 350 ft. Painted Hills Oil Co.'s 1, 34-30-10, changing boilers, td 1550 ft. Paso Robles Oil Co.'s Creston 1, 34-27-15, redr 1622 ft. Panorama Oil Co.'s 1, 7-31-21, sr 1910 ft. Richfield's 1, 15-29-17, repairing rig, td 3735 ft. San Luis Synd.'s 1, 29-31-13, dr sand 2830 ft. Texas Pacific Co.'s 1, 25-32-14, dr shale 2810 ft. Union's Russ 1, 34-32-15, dr hard sand 2272 ft.

SAN MATEO COUNTY—Shell's Butts 1, 21-6-5, co 2500 ft, td 2585 ft; Cowell 1, sdtr dr pipe 5770 ft, td 5905 ft; Cowell 2, 8-6-5, dr 1564 ft.

TULARE COUNTY—Ducor Drilling Co.'s

Reid
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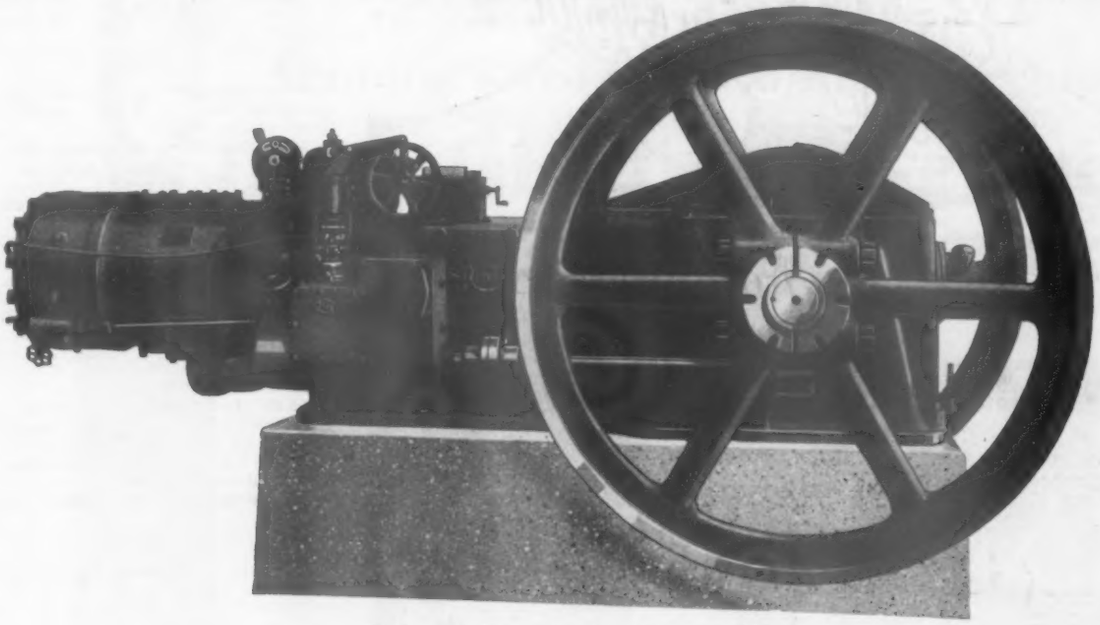

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In doing heavy reverse work, an engine must be fast, and must hold its power at high speed. The power curve of the Reid Type C Enclosed Gas Engine is excellent, and does not drop suddenly when the peak is reached.

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Features:

Entirely enclosed bed plate.

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Replaceable main bearings.

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1, 29-23-27, co 4160 ft. King-Tulare Synd.'s 1, 19-21-23, repairing rig, td 3005 ft.

SOUTHERN CALIFORNIA

CLAREMONT—Claremont O. & G. Co.'s 1, sd 1130 ft.

CALABASAS—Easton and Smith's 1, 19-1-17, dr shale 1326 ft.

COSTA MESA — Mesa Pet. Corp.'s BG 1, 16-6-10, sd 2980 ft.

CYPRESS — Ohio Oil Co.'s 1, 9-4-11, dr 5832 ft.

DAVIDSON CITY — Calif. Well Drilling Co.'s Del Amo 1, 11-4-13, swabbing, making some gas, td 7555 ft.

DOMINGUEZ — Dominguez Extension Oil Co.'s R. B. 1, 22-3-13, swabbing water and some oil, td 5510 ft.

EL SEGUNDO — Southern Calif. Drilling Co.'s Matteson 1, sd 4865 ft.

FULLERTON—Shell Co.'s Stern 1, 8⅝-in cas cmt 4970 ft, td 5005 ft.

HAWTHORNE — San Clemente Oil Co.'s Peck 1, sdtr 8¼-in cas 5170 ft, td 5765 ft.

HUNTINGTON BEACH — Calnan Pet. Corp.'s S. W. 1, sd 5107 ft.

INGLEWOOD—Hu st Oil Corp.'s Simons 1, sd 3740 ft.

LANCASTER—Otis Andrews' 1, 23-8-13, dr 2088 ft. J. B. Hardings' 1, 28-7-11, co 970 ft.

LYNWOOD—Security Pet. Corp.'s 1, 13-3-13, sd 5023 ft.

MONTEREY PARK — Monterey Park Pet. Corp.'s Browning 1, sd 4530 ft.

NEWHALL—W. W. Stabler's Castaic 1, sd 3410 ft.

POTRERO — Associated's Cypress 1, sd 5408 ft.

PUENTE HILLS—Anchor Petroleum's Hudson 1, dr 2346 ft.

SAN FERNANDO—Shell's Mission 2, 4-2-15, coring hard sand 1313 ft.

SAN JOSE HILLS—D. B. Oil Co.'s Amar 1, plugged to 2600 ft.

SEAL BEACH—George F. Getty's 15, 14-5-12, dr 5533 ft. A. D. Kneuper's 1, 10-5-12, 24-in cas cmt 60 ft.

SAN JUAN CAPISTRANO—O. K. Carr's Forster 2, sd 4185 ft.

WATSON—White-Behr Oil Consolidated Oil Co.'s 1, 20-4-13, cmt 8¼-in cas 4810 ft, td 5300 ft.

WESTMINSTER — McCollom and Taylor's S. T. 1, dr shale 2396 ft.

YORBA—Standard Oil Co.'s Y. L. W. 1, dr gray sand 5744 ft.

MISCELLANEOUS

RIVERSIDE COUNTY—Hemet Pet. Co.'s Ward 1, dr hard sand 2740 ft. Spindletop Oil Synd.'s 1, 25-7-10, dr 3275 ft. Trabuco Oil Co.'s 1, dr hard sand 3479 ft.

SAN BERNARDINO COUNTY—Western Pacific Oil Co.'s 3, dr shale 3063 ft, gas showings.

SAN DIEGO COUNTY—Davenport O. & G. Co.'s 1, dr hard sand 493 ft. Torrey Pines Oil Co.'s McGregor 1, co 1788 ft. S. S. Turner's Baler 1, dr shale 706 ft.

OKLAHOMA

GRANT COUNTY—T 28n, R 3w, Sec 6, Otstot Dev. Co.'s Snyder 1, nec, sd 4518 ft.

HARPER COUNTY—T 27n, R 21w, Sec 24, A. F. Kopisch Oil Co.'s Selman 1, nec se, spd and sd.

WOODS COUNTY—T 27n, R 15w, Sec 20, Sooner State Oil Co. and E. R. Black's Marcum 1, c sw, spd and sd.

GRANT COUNTY—T 27n, R 5w, Sec 18, J. W. Bailey et al, Custard 1, c se, ts 4835-47 ft, 800,000 gas, try to get 4-in on bottom.

KAY COUNTY — T 27n, R 2w, Sec 23, Boucher et al's Cooper 1, se c, water 2580-90 ft, td 3450 ft, run 6-in cas.

GRANT COUNTY — T 26n, R 4w, Sec 34, Sooner State Oil Co.'s Royce 1, sw c nw, sd 550 ft.

KAY COUNTY—T 26n, R 2e, Sec 32, J. A. Vincent and National Union Oil Co.'s McNeal 1, nw c ne, sd 2795 ft.

HARPER COUNTY—T 25n, R 22w, Sec 14, Hoffer Oil Co.'s Cooper 1, nw c se, sd 4182 ft.

GRANT COUNTY — T 25n, R 4w, Sec 22, Cowden's Vallner 2, ne c se ne sw, lost tools at 5640 ft, sd.

KAY COUNTY — T 25n, R 1w, Sec 15, Tonkawa Dev. Co.'s McDaniels 1, se c, dr by bit.

NOBLE COUNTY—T 24n, R 3e, Sec 11, Geo. Miller et al's Howe 1, c nw se, r. u. s. t. T 21n, R 1w, Sec 7, R. L. Corley's Williams 1,

The LARKIN Improved SAND PUMP

Manufactured Only at Butler, Penna.

Furnished with either or both of these bottoms

LARKIN REGULAR BOTTOM

LARKIN BIT BOTTOM

—is giving satisfaction everywhere

The LARKIN Improved Sand Pump is flexible, in that it operates successfully at all depths—under all conditions. Under normal conditions this Pump will, when equipped with its REGULAR Bottom, bring out the sand and sediment in record time.

Where cavings have packed hard, the Larkin Bit Bottom may be used. It will break up the hard formations efficiently, and so quickly pass the material through to the pump, that the pump may be operated at full capacity without being delayed to any extent, even by the worst conditions encountered. If you want to be prepared to meet the toughest pumping jobs with the best pump, get the Larkin and have it equipped with either the Regular or Bit Bottoms.

The LARKIN Improved Sand Pump will clean out more wells, for more years, than any sand pump made. Its Barrel is of "NATIONAL" Seamless Steel Tubing. In every detail of construction, the materials used are unexcelled for quality.

There is no better equipment than this Larkin Leader. It has been made at Butler, Penna., for years. It is still made there and there only. Even more today than when the Eastern fields were young, it is the leading sand pump on the market.

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LARKIN & CO., Butler, Penna.

se c ne sw, sd 1920 ft. T 20n, R 1w, Sec 32, Marland Oil Co. et al's Kidd 1, nw c sw, central 8-in 4095 ft, r. u. s. t.

CIMARRON COUNTY—T 5n, R 5e, Sec 21, Ramsey Pet. Co.'s State Land 1, sw c ne sw sw, 8-in at 4001 ft, dr 4340 ft. Sec 27, Ramsey Bros.' State Land 1, c nw ne, 4090-4140 ft, show 35 bbls, hfw 4680 ft, pb to 4040 ft, sd.

CIMARRON COUNTY—T 2n, R 9e, Sec 2, Fenton, Brookins & Flowers' Smaltz 1, sw c ne ne, spd and sd.

TEXAS COUNTY — T 2n, R 18e, Sec 23, Connelly, Trammell & Danner's Graves 1, ne c sw sw, sd 315 ft.

TEXAS COUNTY—T 1n, R 18e, Sec 11, Three Way Oil Co.'s Price 1, se c nw, ts 3318-58 ft, hfw, sd 3490 ft. T 1n, R 19e, Sec 5, Trammell, Connelly & Danner's Taney 1, se c nw, sd 280 ft.

WOODWARD COUNTY — T 24n, R 17w, Sec 32, Otstot Dev Co.'s Simmons 1, se c, sd 1500 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec 9, Pulse & Beamer's White 1, se c nw, sd 4720 ft. T 24n, R 3w, Sec 14, Sagar Oil Co.'s Garsarch 1, se c, dr by 5-in at 4767 ft. T 22n, R 5w, Sec 3, Ashby & Barr's Swinery 1, nw c, sd 740 ft.

ELLIS COUNTY — T 21n, R 25w, Sec 9, Oklahoma Northern Oil Co.'s 1, c se nw, sd 300 ft.

WOODWARD COUNTY — T 21n, R 19w, Sec 15, Burgoyne Bros.' 1, sw c se ne, sd 800 ft. T 21n, R 21w, Sec 25, Sharon's Elmore 1, sw c, sd 2778 ft.

GARFIELD COUNTY—T 21n, R 4w, Sec 12, Beopple et al's Schriver 1, c e l sw sw ne, sd 1850 ft. T 20n, R 4w, Sec 9, Marland's Looman 1, ne c se, sd 5735 ft. Sec 12, Marland's Miller 1, sw cor, sd 4586 ft.

DEWEY COUNTY—T 18n, R 15w, Sec 9, Huckelby & McCoy's Perfect 1, ne c, dr 3360 ft.

LOGAN COUNTY—T 18n, R 4w, Sec 6, Davis & Browning's Woods 1, ne c se, lcn. T 18n, R 3w, Sec 33, Haley & Consolidated Drlg. Co.'s Quier 1, se c sw, show gas 3905 ft, sd for 5-in. T 17n, R 1e, Sec 20, T. B. Slick's Signs 1, nw c sw, sd 5067 ft. Sec 28, T. B. Slick's Berry 1, sw c se, td 5730 ft, pb to 4700 ft.

KINGFISHER COUNTY — T 16n, R 7w, Sec 6, Gault-Brown Oil Co.'s Campbell 1, c nw se, dr 4226 ft. T 16n, R 6w, Sec 27, Crawford & McKenna's Sturgeon 1, ne c sw, sd 4500 ft. T 16n, R 5w, Sec 26, Gault-Brown Oil Co.'s Johnson 1, c nw, sd 4512 ft.

LOGAN COUNTY—T 16n, R 1w, Sec 28, Blackford O&G Co.'s Lair 1, c s l n½ se, sd 1675 ft.

LOGAN COUNTY—T 15n, R 1w, Sec 12, Bu Vi Bar's Kirkpatrick 1, c sw, dr 5300 ft.

CANADIAN COUNTY—T 14n,R 6w, Sec 9, A. D. Spears' Piatt 1, se c ne, sd 3223 ft.

OKLAHOMA COUNTY—T 13n, R 3w, Sec 18, Slick & Bailey's Lufkin 1, c ne se, co 4112 ft. T 12n, R 3w, Sec 15, Cromwell et al's Thompson 1, sw c ne ne, 1000 ft tubing and cmt in hole, td 6870 ft.

CANADIAN COUNTY—T 11n, R 7w, Sec 9, Ramsey Bros.' Newman 1, c s l ne, dr 4680 ft. T 10n, R 6w, Sec 1, J. M. V. Bailey's Robinson 1, c ne nw, spd and sd.

OSAGE COUNTY — T 26n, R 7e, Sec 30, Prod. & Refs. & C. B. Peters' 1, se c ne, dr 100 ft. T 23n, R 10e, Sec 7, Sheeders O&G Co's 1, c ne, reaming 6-in.

PAYNE COUNTY—T 19n, R 1e, Sec 33, Gardner Pet. Co. et al's Ham 1, c sw ne, dr 4650 ft.

LINCOLN COUNTY—T 17n, R 3e, Sec 20, Willis O&G Co.'s Gun 1, nw c se, ts 4636-77 ft, water and sd. T 17n, R 5e, Sec 27, Flynn & Morgan's Smith 1, se c ne, nw, ts 4082-4122 ft, hfw, plugging. T 13n, R 4e, Sec 16, Bu-Vi-Bar 1, School Land 1, c ne se, sd 4500 ft.

TULSA COUNTY—T 17n, R 13e, Sec 1, E. A. Hawley's Taylor 1, se c ne, spd and sd.

CREEK COUNTY—T 14n, R 9e, Sec 1, L. C. Wheeler & King's Morton 1, se c nw, lcn.

OKFUSKEE COUNTY—T 12n, R 10e, Sec 8, Blakely et al's Yarhola 1, sw c se nw, sd 3157 ft. T 11n, R 10e, Sec 4, Moose & Daniels' Stidham 1, sw c nw, sd 622 ft.

MUSKOGEE COUNTY—T 15n, R 18e, Sec 12, York O&G Co.'s Jobe 1, nw c se, show oil at 1100 to 1110 ft, D. & A. at 1832 ft. T 13n, R 17e, Sec 34. Elk Drlg. Co.'s McKee 1, c s l se se se, sd 160 ft.

MUSKOGEE COUNTY—T 13n, R 18e, Sec 33, L. T. Haynie's Linder 1, c se, sd for 5-in 1766 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec 32, Pattison et al's McDuff 1, sw c nw se, ¶3 at 4472-4525 ft, dr 4802 ft.

HASKELL COUNTY—T 9n, R 18e, Sec 10, Marion Oil Co.'s Sanders 1, nw c ne sw, sd 2250 ft.

LATIMER COUNTY—T 5n, R 18e, Sec 15, Limestone O&G Co.'s Murray 1, sw c, sd 1700 ft.

CLEVELAND COUNTY—T 10n, R 2w, Sec 22, Cromwell & Franklin's Donovan 1, c sw, sd 4706 ft.

POTTAWATOMIE COUNTY—T 10n, R 3e, Sec 12, Sikes, Kilgore & Shaffer's Ives 1, c se se, Hunton 5347-5420 ft, good show oil, sd 5435 ft, td.

SEMINOLE COUNTY—T 10n, R 6e, Sec 3, T 10n, R 6e, Superior's Davis 1, sw se, bldg rig. T 10n, R 7e, Sec 6, Blackwell O&G Co.'s Bean 1, se c ne sw, dr 3620 ft. Sec 18, Shaffer et al's Jones 1, sw c ne, dr 2100 ft.

POTTAWATOMIE COUNTY—T 8n, R 2e, Sec 24, Superior Oil Corp.'s Jones 1, sw nw ne, ur 6-in cas 4390 ft. T 8n, R 4e, Sec 1, Amerada Pet. Co.'s Gravel 1, sw se ne, hfo at 4114-95 ft, Wilcox 4478-85 ft, hfw, pb to 4340-80 ft, shot 40 qts, co.

HUGHES COUNTY—T 8n, R 10e, Sec 1, Bauer et al's Penn 1, nw c sw ne, cellar.

CLEVELAND COUNTY—T 7n, R 1w, Sec 15, Sooenr State Oil Co.'s Vandeveer 1, ne nw sw, 8-in at 2994 ft and sd.

POTTAWATOMIE COUNTY—T 7n, R 2e, Sec 17, T. B. Slick's Spangler 1, nw se nw nw, dr 2413 ft.

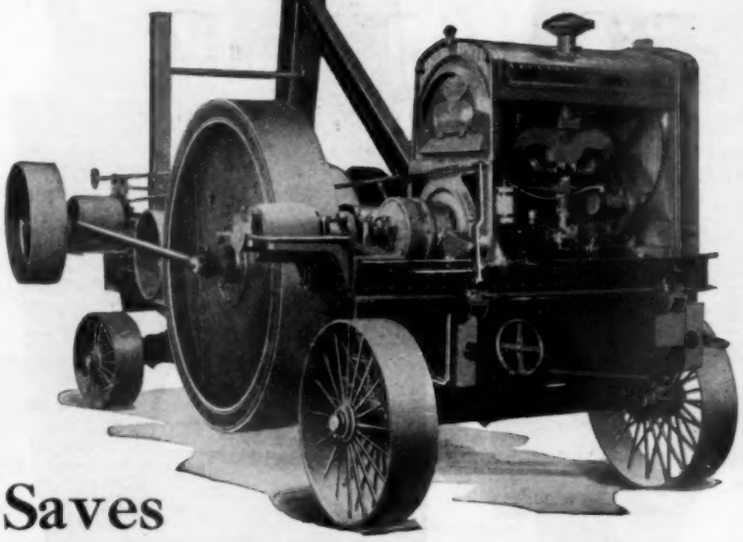
SEMINOLE COUNTY—T 7n, R 6e, Sec 7, Simon & Beam's Palmer 1, ne nw ne, rig.

POTTAWATOMIE COUNTY—T 6n, R 2e, Sec 10, Davis, Detrick et al's McGahey 1, se c nw, sd 4988 ft. T 6n, R 5e, Sec 16, T. B. Slick's School Land 1, se c, cmtg 8-in 3794 ft. Sec 20, Roxana Pet. Corp.'s Deister 1, ne c se ne, r. o. g.

SEMINOLE COUNTY—T 6n, R 6e, Sec 1, T. B. Slick's Moore 1, sw ne sw, ur 6-in 2875 ft.

HUGHES COUNTY—T 5n, R 9e, Sec 17, E. W. Whitney's Huddleston 1, se c sw, sd 850 ft.

STAR "E" TYPE



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Paul Critton, Stamford, Texas, writes—"Have just completed a 2500 foot contract in Jones County with a Star No. 30E Type Machine. Fuel and water expense was 75 per cent less than that required by a steam outfit. The No. 30E meets all my requirements. It will make money for the contractor."

C. W. Jones, Bradford, Pa., reports—"With your 'E' Type power unit installed on my No. 30 Star Machine I drilled nine wells averaging 1600 feet. It is an extremely fast driller. The clutch gives excellent service—never drags and is easy to adjust. I prefer the Star 'E' Type to any drilling unit I own or have seen in operation."

Star "E" Type Power Units, using gasoline or natural gas, can easily be installed on our Steam Machines.

Send coupon today for full particulars.

THE STAR DRILLING MACHINE CO.
Akron, Ohio.

Please send full information on "E" type machine for drilling..... feet. Also on replacement unit for No. ..... Machine.

Name .....

Address .....

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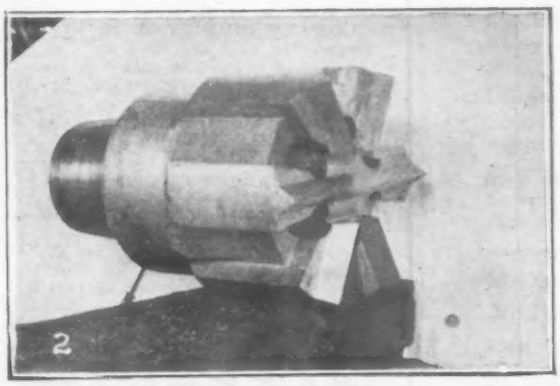
THE PENNINGTON **HAMMER ROCK-BIT**

It Hammers as It Rotates—



Utilizes every principle that makes hard rock easy for standard tools;

Years in the making;

Tested many times above ground;

Then run in the hole many times;

Now drilling regularly.

Inside the drill pipe just above the bit is a heavy, solid steel hammer stem, elevated fifteen inches by circulation, then shot down, striking TWELVE THOUSAND BLOWS per hour directly on top of the bit while rotating and flushing cuttings out. Hour after hour, for DAYS without coming out of the hole, this bit pours rock cuttings out at the surface, drilling hard rock faster than soft.

The bit washes to bottom without the hammer striking; but, reaching bottom, the hammer takes up its fast work automatically; lift it six inches off of bottom, the hammer ceases striking but circulation passes on through, for no blow is struck while the hammer bit is suspended, making it safe to the drill pipe.

Drill pipe does not move up and down but serves simply to rotate the bit and carry slush to it. Screws into the usual rotary drill collar and any rotary rig, without change, operates the bit; any driller "gets" the bit in three minutes; no especial weight on top of it required; no lubrication necessary; twists the pipe very little in rotating.

MADE OF THE FINEST OF ALLOY TOOL STEELS, ACCURATELY HEAT TREATED. DESIGN HEAVY AND RUGGED.

Fully covered in The United States Patent Office.

Inquiries especially solicited from hard rock country where drilling is made difficult by high gas pressure.

The United States Heat-Treating Co.

319 DAKOTA SAN ANTONIO, TEXAS

Sec 20, Noble O&G Co. et al's Wickett 1, se c, dr 2260 ft.

GARVIN COUNTY — T 4n, R 1e, Sec 15, Dixie Oil Co.'s Perkins 1, se c sw, dr 5415 in sand. T 4n, R 3e, Sec 10, Garland Oil Co.'s Strickland 1, sw nw sw, fsh 2690 ft.

PONTOTOC COUNTY—T 4n, R 6e, Sec 13, American O&R Co.'s Wright 1, nw ne ne, dr 2200 ft.

HUGHES COUNTY—T 4n, R 9e, Sec 14, Clark & Cowden's Burrow 1, c nw ne, fsh 2820 ft.

GARVIN COUNTY—T 3n, R 1e, Sec 12, Magnolia's Vaughn 1, nw sw nw, dr 5550 ft in lime.

PONTOTOC COUNTY—T 3n, R 8e, Sec 10, Douglas Oil's Johnson 1, c nw nw, dr 380 ft.

COAL COUNTY—T 2n, R 8e, Sec 5, Wichtex Oil Co.'s Folsom 1, c nw nw, lcn.

MURRAY COUNTY—T 1n, R 2e, Sec 17, Revels & McGee's Wolfe 1, nw c, dr 605 ft.

COAL COUNTY—T 1n, R 8e, Sec 35, W. E. McGraw et al's Patton 1, sw c se ne, co 1595 ft. T 1n, R 9e, Sec 24, Galbreath et al's Jones 1, sw c se, spd and sd.

CADDO COUNTY—T 10n, R 12w, Sec 28, Magnolia's Shelby 1, sw c, dr 2790 ft.

BECKHAM COUNTY—T 9n, R 22w, Sec 32, O&H Pet. Co.'s Barnes 1, owd, dr 3120 ft.

GRADY COUNTY — T 9n, R 5w, Sec 13, Remington's Fulton 1, sw c ne, sd 720 ft.

KIOWA COUNTY—T 7n, R 15w, Sec 35, David Malernee's Van Kirkland 1, nw c, co 655 ft. T 6n, R 15e, Sec 6, Johnson McDowell's 1, c sw ne, dr 855 ft.

CADDO COUNTY—T 6n, R 12w, Sec 29, W. J. Hartley's Gilbreath 1, se c nw se, owd, sd 3394 ft.

GRADY COUNTY — T 4n, R 7w, Sec 21, Commercial Drlg. Co.'s Crisman 1, c ne ne, dr 1825 ft.

COMANCHE COUNTY—T 3n, R 10w, Sec 24, Jolly-Ogg's Sparlin 1, se c ne, dr 2907 ft.

STEPHENS COUNTY—T 2n, R 5w, Sec 20, Martin & Smythe's Vestal 1, c ne se, lcn.

COMANCHE COUNTY—T 1n, R 12w, Sec 14, Greene et al's Wilson 1, cmtd 5-in at 3315 ft, bailing.

JACKSON COUNTY—T 1s, R 20w, Sec 23, Stanley McGregor's 1, sw c nw, lcn.

KIOWA COUNTY — T 2s, R 16w, Sec 6, Lanfair's 1, se sw se, sd 2464 ft.

STEPHENS COUNTY—T 3s, R 7w, Sec 7, Pace et al's Absner 1, nw c, dr 2005 ft.

Sadly in need of drainage, this Texas road will soon be in good shape once more. See the Armco Corrugated Culvert ready for laying?

Good drainage helps keep good roads good !

(Note: Good drainage is better with Armco Corrugated Culvert)

In oil fields the drainage of roads is exceptionally important. Getting from here to there in a hurry—and getting there at all—is often a question of proper drainage facilities.

You can depend on the permanent efficiency of Armco Corrugated Culvert for the drawing off of surplus water, keeping road and road bed in top shape.

Armco Corrugated Culvert is made of strong, rust-resisting Armco Ingot Iron. It is scientifically corrugated for even greater strength. And, in case of necessity, it may be moved from one location to another with ease.

Write for detailed information on how Armco Corrugated Culvert is solving many oil field drainage problems.

Western Metal Manufacturing Co.

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P. O. Box 1370, Arcade Station, Los Angeles, California

628

JEFFERSON COUNTY—T 5s, R 8w, Sec 28, Amerada's Emerson 1, nw c se sw, dr by tools 950 ft.

MARSHALL COUNTY—T 4s, R 4e, Sec 35, Wirt Franklin Pet. Corp.'s Foster 1, sec sw sw nw, dr 300 ft. T 5s, R 4e, Sec 11, Bilbo's Chapman 1, ne c nw ne, sd 380 ft.

KANSAS

BARBER COUNTY—T 30, R 14w, Sec 27, Rowland et al's Pickens 1, owd, ne cor nw ne, dr 3422 ft. T 31, R 12w, Sec 17, Merriman et al's Winters 1, c e½, dr 3625 ft. T 33, R 12w, Sec 19, Schaffer et al's Boggs 1, c sw, dr 5585 ft. T 33, R 13w, Sec 2, Schaffer et al's Carter 1, c se se, fsh 3980 ft. T 34, R 13w, Sec 20, Barton Oil Co.'s Blunk 1, c ne nw, dr 3510 ft.

BARTON COUNTY—T 17, R 11w, Sec 34, McJolton et al's Evanston 1, se c nw, r. o. g. T 20, R 13w, Sec 12, Everette & Wiley's Ward 1, nw c sw, sd, 3940 ft.

BUTLER COUNTY—T 24, R 3e, Sec 22, Fleming et al's Brainard 1, ne c nw, lcn. T 24, R 8e, Sec 5, Mathews et al's Harsh 1, ne c sw, sd 900 ft. T 25, R 4e, Sec 18, Wichita Drlg. Co.'s Joseph 1, ne c se nw, ts 2730-36 ft, 400 ft oih. T 27, R 3e, Sec 24, La Robb Oil Co.'s Baysinger 1, ne c sw, rig. T 28, R 8e, Sec 21, Burford & Brimm's Ferris 1, se c ne sw, lcn. T 29, R 4e, Sec 21, E. Wilcox et al's Holcomb 1, ne c se nw, sd 1436 ft.

CHASE COUNTY—T 21, R 7e, Sec 9, Grener, Fowler et al's Carson 1, ne c, dr 2370 ft.

CHAUTAUQUA COUNTY—T 32, R 8e, Sec 15, Roth & Faurot's Hamil 1, nw c sw nw, lcn.

CLARK COUNTY — T 32, R 21w, Sec 21, Watchorn O&G Co.'s Stephens 3, c e l w½ nw nw, dr 1700 ft.

CLOUD COUNTY—T 6, R 4w, Sec 6, Concordia Oil Co.'s Murdock 1, se c, sd 3590 ft.

COFFEY COUNTY — T 22, R 14e, Sec 8, Finney et al's Mitchell 1, se c ne, dr 1700 ft. T 22, R 15e, Sec 11, Clark et al's Douglas 1, nwc se ne, sd 920 ft.

COWLEY COUNTY—T 30, R 3e, Sec 3, Vickers Pet. Co.'s Daniels 1, nw c ne, sd 1650 ft. T 30, R 6e, Sec 20, Allison & Fitzwilliams' Manley 1, ne c nw se, sd 1685 ft. Sec 36, Herron et al's Marshall 1, owd, sw c ne, dr 1834 ft. Sec 18, Lewis Gas Prod. Co.'s Cook 1, ne c sw, dr 1630 ft. T 33, R 4e, Sec 4, White Oil Co.'s White 1, sw c ne, dr 1860 ft. T 34, R 3e, Sec 10, Shawver et al's Amen 1, nw c, dr 3250 ft.

DICKINSON COUNTY—T 14n, R 4e, Sec 11, Phillips Pet. Co.'s Gugler 1, se c nw, D. & A. 2218 ft. T 16, R 4e, Sec 2, Skow & Ritchey's Will 1, c nw nw, lcn. Sec 18, Gilliland's Schlessner 1, c sw ne, dr 1400 ft.

ELK COUNTY—T 28, R 13e, Sec 22, Price et al's Thompson 1, c e l se sw, sd 400 ft.

ELLIS COUNTY — T 12, R 17w, Sec 25, Derby Oil Co.'s Weigle 1, c nw, dr 2745 ft. T 13, R 19w, Sec 21, Thomas & Moncreif's Boettcher 1, c sw, lcn.

FRANKLIN COUNTY—T 16, R 18e, Sec 17, Smith, Thrice & Fisher's Owens 1, c e l e¼ e½, sd 1450 ft. T 17, R 17e, Sec 25, Omar O&G Co.'s Bush 1, sec sw, lcn.

GEARY COUNTY—T 12, R 7e, Sec 10, Pioneer Pet. Co's Chase 1, se c, dr 2168 ft.

GREENWOOD COUNTY—T 25, R 12e, Sec 12, Sheedy et al's Gilroy 1, swc se, dr 1530 ft. T 26, R 11e, Sec 28, Paul & Parker's Wiley 1, sw c se nw, spd and sd. T 28, R 12e, Sec 1, Swanson et al's Mayes 1, se c nw ne, sd 1600 ft.

GRAHAM COUNTY—T 8, R 25w, Sec 27, Gulf Coast Drlg. Co.'s St. John 1, owd, swc nw se, dr 3490 ft.

HARPER COUNTY—T 34, R 6w, Sec 24, Amerada Pet. Corp.'s Mendenhall 1, c se se, dr 5024 ft.

JACKSON COUNTY—T 8, R 14e, Sec 3, Smith et al's Wabunce 1, ne c nw, dr 1500 ft.

JEFFERSON COUNTY—T 9, R 19e, Sec 13, Northern Counties' Edwards 1, se c nw nw, sd 2405 ft. T 10, R 17e, Sec 19, Wichita Oil Co.'s Simpson 1, nw c sw sw, rig.

LABETTE COUNTY—T 33, R 17e, Sec 1, Cowell et al's Hornbeck 1, sw c ne sw, sd 1375 ft.

McPHERSON COUNTY—T 17, R 1w, Sec 18, Galt-Brown et al's Fross 1, c ne, rigging. T 20, R 3w, Sec 20, Polar Oil Co.'s Grey 1, c nw, spd and sd. T 21, R 3w, Sec 9, Herron et al's Voshell 1, ne c, spd and sd.

MARION COUNTY—T 17, R 3e, Sec 13, Rosenthal et al's Talchman 1, nw c sw sw,

spd and sd. T 19, R 4e, Sec 17, Frank et al's Reed 1, nwc, td 2841 ft, pb 2400 ft, sd.

MEAD COUNTY — T 33, R 28w, Sec 9, Blackwell O&G Co.'s Lilly 1, c se, dr 3752 ft.

MORRIS COUNTY—T 14, R 7e, Sec 32, Klein et al's Barber 1, se c nw, rig. T 16, R 9e, Sec 22, Lambert et al's Southard 1, sw c se, lcn.

NEMAHA COUNTY—T 3, R 11e, Sec 19, Nemeha O&G Co.'s Myers 1, nw c, sd 3050 ft.

OSBORNE COUNTY—T 9, R 15w, Sec 30, Davis et al's Pruter 1, se c sw, dr 3250 ft.

OSAGE COUNTY—T 15, R 15e, Sec 3, Barber et al's Lease 1, c se se, sd 260 ft. T 15, R 16e, Sec 27, West et al's Bailey 1, sw c ne, sd 600 ft. T 17, R 17e, Sec 8, Mull Vit Dev. Co.'s Neil 1, nw c sw ne, sd 2931 ft.

POTTAWATOMIE COUNTY—T 9, R 8e, Sec 7, Shaw et al's Washington, se c, lot 17, rig. T 10, R 12e, Sec 11, Crawford et al's St. Mary 1, sw c, sd 2290 ft.

RENO COUNTY—T 22, R 4w, Sec 6, Danciger et al's Williams 1, ne c sw se, rig.

RILEY COUNTY—T 10, R 7e, Sec 20, Welton Oil Co.'s Thierer 1, nw c, sd 3028 ft.

ROOKS COUNTY — T 8, R 16w, Sec 14, Krueger et al's Poor 1, ne c, spd and sd.

RUSH COUNTY—T 17, R 17w, Sec 27, Valerious O&G Co.'s Schreverman, c nw, dr 1185 ft.

SEDGEWICK COUNTY—T 26, R 1w, Sec 12, Gypsy, Marland et al's Wright 1, se c ne se, dr 1775 ft.

SEWARD COUNTY—T 33, R 33 w, Sec 14, Ash et al's Son 1, owd, ne c, dr 3200 ft.

SHERMAN COUNTY—T 7, R 40 w, Sec 20, Hanson et al's Murry 1, owd, nec sw nw, dr 2990 ft.

SUMNER COUNTY—T 33, R 3w, Sec 22, Otstot Dev. Co. et al's Bartlow 1, se c, sd 1860 ft. T 34, R 2e, Sec 1, Endfield & Foster's Houston 1, c ne sw, dr 1400 ft. T 34, R 2w, Sec 23, Gypsy Oil Co.'s Douglas 1, ne c se nw, tc 4493-99 ft, 16 bbls per hour, shut in. T 34, R 3w, Sec 4, Jarvis et al's Wernecke 1, se c sw, dr 4630 ft. T 34, R 4w, Sec 11, Jarvis et al's Wycoff 1, sw c nw, dr 4582 ft. T 35, R 1e, Sec 9, Otstot et al's Volker 1, nw c ne, rig.

TREGO COUNTY—T 13, R 21w, Sec 20, Central Commercial Oil Co.'s Ellis-King, ne c sw ne, sd 315 ft.

WABUNSEE COUNTY—T 11, R 10e, Sec 24, Doric Oil Co.'s Jones 1, ne c sw, sd 1530 ft. T 13, R 12e, Sec 15, Eskridge Oil Co.'s Henderson 1, ne c sw ne, sd 3700 ft.

WOODSON COUNTY—T 24, R 14e, Sec 32, Spencer & Rainey's Kimball 1, se c ne, 1754, d and abnd. T 24, R 16e, Sec 3, Fees et al's Roberts 1, nw c ne, sd 1418 ft.

TEXAS

TEXAS GULF COAST

AUSTIN COUNTY—
Alexander & Lyle, Goebel 2 ..... * 3785

BRAZORIA COUNTY—
Gulf, Perry 3, Stratton Ridge ..... * 5850
Bowman et al, Seaburn 1, Stratton Ridge ..... * 3760
Rucks et al, Muldoon 2, Slop Bowl * 1130

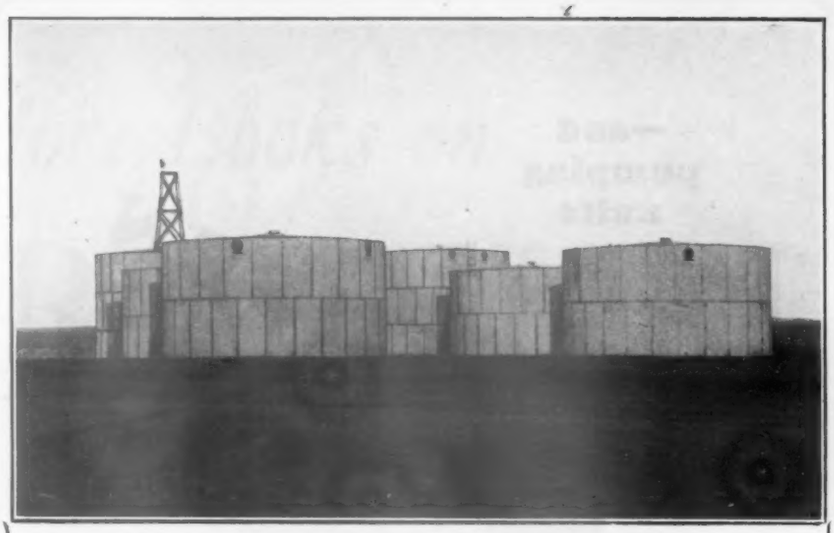
LIBERTY COUNTY—
Sun, Richardson 1, S. Liberty ..... * 1320

AUSTIN COUNTY — Humble's Wilson 1, Raccoon Bend, dr 4252 ft, hard sandy shale; Grawunder A-1, Raccoon Bend, dr 3607 ft, sandy shale. L. H. Weadock's Ward 1, sd 2020 ft. Alexander & Lyles' Goebel 1, abnd at 3785 ft.

BRAZORIA COUNTY—Roxana's Allen Bernard 1, Allen Dome, pumping 12 bbls at 5337 ft; Allen 4, Allen Dome, flowing 160 bbls; Randon 1, Allen Dome sdtrk at 4942 ft. Gulf's Perry 3, Stratton Ridge abnd at 5850 ft; Perry 4, Stratton Ridge, ru. Bowman et al's Seaburn 1, Stratton Ridge, abnd at 3760 ft. Stanfield & Myers' McNeil 1, Hinckle Ferry, sd 1420 ft. Rucks et al's Muldoon 1, Slop Bowl, abnd at 1130 ft. Brazo Oil Co.'s Wisdom 3, Damond Mound, dr 1805 ft, lime rock. McNellie Oil Co.'s Bartlett 1, West Columbia, dr 1430 ft, gbo.

CHAMBERS COUNTY — Pure Oil Co.'s Lost River 1, Lost Lake Dome, pulling screen to deepen; Old River 1, Lost Lake Dome, ru; Trinity River 1, Lost Lake Dome, ru; Little Lost Lake 1, Lost Lake Dome, dredging canal; Lost River Lake 1, dk; Cut-off Bayou 1, Lost Lake Dome, dk. R. L. Bartlett's Fisher 1, Barbers Hill, pulling screen, td 2160 ft.

COLORADO COUNTY — Rich Oil Corp.'s Von Rosenberg 1, 2½ mi ne Columbus, dr 2645



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Is Unexcelled for RUST RESISTANCE

Thorough exposure tests, conducted by the American Society for Testing Materials, have shown that copper-bearing steel is superior in rust-resisting qualities to any other type of sheet steel. The *durability* of MALONEY Bolted Steel Tanks is insured by our use of Keystone Copper Steel—a copper-bearing steel of the highest quality and merit.

All MALONEYS have our patented "crimp" which promotes accurate fit of parts. Our special gasketing and Gasco cement render seams oil, water and gas tight. Seams are reinforced with rigid steel channels. Our special bolts have a tensile strength of 90,000 pounds—35% stronger than ordinary bolts. Cleaning out plates are large and set flush with bottoms. Paint is our Maloney special pearl gray paint. Valves and thief-hatches are the best the market offers.

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Sizes: 12 to 10,000 Barrels

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PROVIDENCE, R. I.
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Distributors

ft, sandy shale. Deal et al's Tanner 2, 3 mi s Glidden, sd 1025 ft. Johnson Bros.' Beckett 1, lcn.

FORT BEND COUNTY—Sun Oil Co.'s E. C. Farmer 1, Boling, dr 2050 ft, salt. E. C. Farmer 2, Boling, lcn; Kaspereck 3, Boling, dr 2500 ft, gbo; H. R. Farmer 6, Boling, dk; Gulf's Trone 7, Long Point, dr 535 ft, gbo; J. M. Moore 15, Moore's Field, dr 4465 ft, lime. Humble's Brazos Farm 1, Dewalt dome, dr 1627 ft, sandy shale; Sugarland Industries 2, Dewalt dome, bldg dk. Vacuum Oil Co.'s Levy 1, Thompson, dr 1630 ft, gbo.

HARRIS COUNTY—Juanita Oil Co.'s Kitsman 1, 3 mi n Cypress, sd 2010 ft. Hunt et al's Lobit 1, 4 mi n Goose Creek, dr 2148 ft. Humble-Marland's Warren 4, Hockley, dr 635 ft, gbo.

JEFFERSON COUNTY — Deep Test Oil Co.'s McFaddin 1, 4 mi ne Spindle Top, sd 2175 ft. Cedar Bayou Oil Co.'s Johnston 1, 8 mi n Goose Creek, ru. Southern Spindle Top O. & Dev. Co.'s Young 1, 1 mi w Nederland, sd 3425 ft. Port Arthur O. & Dev. Co.'s West 4, Westbury, dr 4145 ft, gbo. A. M. Deems et al's Mashman 1, 1 mi s Voth, dr 840 ft, gbo. Traders Oil Co.'s Cissell 1, Spindle Top, dr 4685 ft, rock. The Texas Co.'s Gladys City 1, Spindle Top, reaming at 4600 ft. Beaumont Oil Co.'s Tyrrell 1, 2 mi w Brooks, dk.

LIBERTY COUNTY—Barlow et al's Minchcliff 1, 2¼ mi ne Cleveland, sd 2215 ft. The Texas Co.'s Staiti 9, S Liberty, bailing 3405 ft; Staiti 10, S. Liberty, dr 2940 ft, sand and boulders; Staiti 11, S. Liberty, dk; Pickett 1, nw extension S. Liberty, dr 3300 ft, shale; Green 4, nw extension S. Liberty, dr 2097 ft. Sun Oil Co.'s Richardson 1, nw extension S. Liberty, abnd at 1320 ft; Cunningham 1, nw extension S. Liberty, dk; Singleton 1, nw extension S. Liberty, cap rock 2065 ft. Harrison Oil Co.'s Quintette 3, N. Dayton, lcn; Humble's Sterling 1, Moss Bluff, lcn. Sun Oil Co.'s Kyle 1, Moss Bluff, lcn. Big Dome Interests' Finley 1, 2½ mi nw Hardin, dr 2138 ft, shale.

MATAGORDA COUNTY—Matagorda County Dev. Co.'s Hawkins 1, Bay City, sd 1985 ft. Gulf's Sanborn 6, Hawkinsville, dr 865 ft, salt; Vinyard 1, Hawkinsville, dr 3635 ft, gbo.

SOUTH LOUISIANA

CAMERON PARISH—
Yount-Lee Oil Co., State Land 7, Hackberry dome ..... * 4500

ASCENSION PARISH—Gulf's United Lands Co. 7, Sorrento Dome, set cas at 1100 ft. Acme Prod. Co.'s DeHaas-Eby 1, Sorrento, dk. Triumph Oil Corp.'s Lacey et al's 1, 1½ mi se Sorrento, dk.

CALCASIEU PARISH—Union Sulphur Co.'s Fee 725, Sulphur Dome, dr 435 ft, gravel; Fee 726, Sulphur Dome, ru; Fee 727, Sulphur Dome, dr 2560 ft, rock.

CAMERON PARISH—Pure Oil Co.'s Sweet Lake 2, Sweet Lake, waiting on rig; Sweet Lake 3, Sweet Lake, pulling screen; Sweet Lake 4, Sweet Lake, pulling screen; Sweet Lake 5, Sweet Lake, dr 5665 ft. La. Land & Explo. Co.'s Calcasieu Lake B-1, ½ mi ne Kelso Bayou Dome, bldg dk. Calcasieu Oil Co., Magnolia & Union Sulphur Co.'s Caldwell 2, Kelso Bayou dome, will pump; Doiron 2, Kelso Bayou, ru; Watkins 5, Kelso Bayou, ru. Noble et al's Ellender 1, Hackberry, standing 4490 ft. Roxana's Watkins Est. 2, Black Bayou district, lcn. Yount-Lee Oil Co.'s State Land 7, Hackberry, abnd at 4500 ft, rock; State Land 9, Kelso Bayou, dr 65 ft; State Land 10, Kelso Bayou, ru; State Land 12, Kelso Bayou, lcn; State Land 13, Kelso Bayou, lcn.

IBERIA PARISH—La. Land & Explo. Co.'s Vermilion Bay A-2, dr 1060 ft, gbo. Gulf's State Z-5, Loreauville, ru; Broussard et al 2, Loreauville, dr 900 ft. Jefferson O. & Dev. Co.'s Jefferson 2, dr 5505 ft, lme rock.

IBERVILLE PARISH—Union Sulphur Co.'s Schwing 2, Bayou des Glaise dome, dr 3015 ft.

JEFF DAVIS PARISH — Scroggins et al's Purveiance 1, Welsh, dr 1885 ft, gbo.

LA FOURCHE PARISH—Gulf's Stark et al's 3, Thibodaux, dr 1175 ft, gyp; Stark et al's 4, Thibodaux, lcn.

ST. MARTIN'S PARISH—Rycade's Fee 3, Bayou Boullion, coring sand 1910 ft. Yount-Lee Oil Co.'s Louisiana Pet. Co. 1, Anse la Butte, lcn.

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Say you saw it in The OIL WEEKLY

PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week ending May 12	Previous week	Total this month	Total this year	This week last year	This month 1927	Total same date 1927	Year total 1927
Arkansas	..	8	8	89	6	10	160	379
California	13	18	31	377	31	67	613	1,226
Louisiana	12	13	25	265	22	36	234	812
Kansas	10	26	36	424	9	16	447	972
Oklahoma	51	66	117	1,155	107	186	1,725	3,702
Texas	124	203	327	2,759	168	355	4,174	8,665
Mountain States	..	..	..	..	15	17	278	494
Totals	210	334	544	5,061	358	587	7,631	16,149

OKLAHOMA

CADDO COUNTY — Abernathy & Ashton 1, c nw, 15-12-11w.

CARTER COUNTY—Simpson & Fell, Winters 2, sw se se, 19-1s-3w. Simpson & Fell, M. Walker 5, se c sw nw, 10-4s-2w.

COTTON COUNTY—Jenkins et al, Record 1, ne c sw, 6-2s-10w.

CREEK COUNTY—Dixie Oil Co., Tahkaney 3, nw c se se, 7-19-9e. Devonian Oil Co., Unallotted 3, c n l s½ se nw, 4-18-12e. Bryan & Emery, Fulsom 1, nw c sw, 8-16-11e. Stansbury & Young, Snyder 1A, sw c ne ne nw, 34-15-10e. Shaffer O. & R. Co., Long 3, nw c ne ne, 6-14-9e. C. O. Buckles, Fraley 2, c w l ne se, 22-18-8e. C. H. Lebow, L. Tiger 1A, sw c se nw nw, 17-17-7e. Bu Vi Bar Oil Co., Cain 4A, ne c se, 18-17-7e.

GRADY COUNTY—Carter Oil Co., B. A Horton 6, ne nw ne, 8-3n-5w. Magnolia Pet Co., Heathley 4, c s l n½ sw ne, 2-4n-8w Carter Oil Co., Carter-Kerans 5, nw ne se, 21 3n-5w.

HUGHES COUNTY — Magnolia Pet. Co. Jetty 1, nw ne sw, 21-7-8e.

JEFFERSON COUNTY—Sigler & McCall, Peniston 2, c s l n½ s½ s½, 17-7s-5w.

JOHNSTON COUNTY—Wirt Franklin Pet. Corp., Wilkes 1, sw c se, 18-4s-4e.

KAY COUNTY—McGraw & Burnham, Alberty 1, c se se, 32-29-1e.

MUSKOGEE COUNTY—S. Threlkel et al, Cobb 2, se c sw nw sw, 6-14-19e. P. H. Stein et al, Cobb 2, ne c se nw sw, 6-14-19e. F. S. Duga et al, Harris 1, nw c se, 19-15-19e. R. J. Keeney et al, Grayson 1, sw c nw nw, 9-15-15e.

OKFUSKEE COUNTY — Oriental Trading Co., Hully 1, ne nw ne, 29-10-10e. Bransdall Oil Corp., Tiger 1, se c ne, 31-12-10e.

OKMULGEE COUNTY — Silurian Oil Co. 51, nw se ne, 18-23-12e. C. F. Lake et al 1, se c nw, 32-24-8e.

PAWNEE COUNTY — Washoma O. & G. Co., Buffalo 1, se c ne, 33-22-5e.

PONTOTOC COUNTY — Gillespie et al, Fleming 2, sw c se, 12-5n-4e.

POTTAWATOMIE COUNTY—Darby Pet. Co., Harbor 1, se ne sw, 23-7-4e. Gypsy Oil Co., LeClari 1, nw sw se, 23-7-4e. Gypsy Oil Co. et al, Powell 1, se c nw, 19-7-5e.

SEMINOLE COUNTY—Magnolia, Foreman 1, se sw se, 13-8-7e. Sinclair O. & G. Co., Cosar 4, ne nw nw, 36-8-6e. Gypsy Oil Co., Cosar 1, nw c ne, 36-8-6e. Continental Oil Co., Cosar 5, nw ne nw, 36-8-6e. Gypsy Oil Co., Cosar 1, sw nw sw, 25-8-6e; Cosar 2, sw se sw, 25-8-6e. Marland Oil Co., Mathis 1, ne se sw, 7-8-6e. Superior Oil Corp. et al, Walker 2, sw ne ne, 2-9-5e. Dixie Oil Co., Foster 3, nw sw sw, 28-8-8e.

STEPHENS COUNTY—Prairie O. & G. Co., Bond 1, nw sw sw, 7-2s-7w. Pearce & Brown, Burkes 1, nw c se, 5-2n-6w. Winkler & McQueen, Burns 1, se c nw, 31-1n-8w. Big Twelve Oil Co., Taliaferro 4, c w l se sw, 27-1s-8w.

TILLMAN COUNTY—A. J. Bundy, Hayter 1, c n l s½ se, 23-2s-17w.

TULSA COUNTY—Glidden Oil Corp., B. Wray 1A, c n l nw sw, 35-19-13e. Posey Short, Ismael 1A, ne c se, 13-18-12e. Scott et al, W. Billy 1A, ne c sw, 33-17-14e.

WAGONER COUNTY—H. H. Orr, Grayson 2, se c sw, 34-17-18e.

CALIFORNIA

COALINGA—Zier Oil Co., N-8, 1-20-14.

KERN RIVER—Pan American Pet. Co., 29, 22-28-27.

LONG BEACH—Shell Co., Andrews 7, 29-4-12. Calif. Pet. Corp., B-R 1, 30-4-12. Pan American Pet. Co., A-4, 29-4-12. Bolsa Chica Oil Co., Combs 2, 30-4-12. Dabney-Johnston Oil Corp., 11, 24-4-13. Herndon Pet. Corp., H-8, 28-4-12. Rio Grande Oil Co., B-9, 28-4-12. Calif. Pet. Corp., Yochem 4, 20-4-12.

McKITTRICK—The Ohio Oil Co., 1, 8-30-22.

OJAI—Continental Oil Co., Thompson 1-M, 22-4-22.

RICHFIELD—George W. Johnson, D. C. 1, 28-3-9.

KANSAS

COWLEY COUNTY—Roth & Faurot, Townlot 4, lot 4, blk 38, City of Winfield, 22-32-4e. White Eagle O. & R. Co., Smith 1, sec ne se, 26-34-5e.

ELK COUNTY—Empire O. & R. Co., Porter 4, swc ne nw, 13-29-8e. Denman et al, Lewis 3, sec sw se, 35-31-10e.

GREENWOOD COUNTY—Shaffer & Howell, Schwab 1, nwc sw se, 30-22-13e.

MARION COUNTY—Youker & Hoffman, Martin 1, sec sw, 3-17-4e. Phillips Pet. Co., Franks 2, swc se se, 15-17-4e. Lariaux et al, Merrilatt 4, swc nw ne nw, 23-17-4e.

SALINE COUNTY—Estey et al, Peterson 1, c ne, 6-16-5w.

SUMNER COUNTY—Ramsey et al, Caldwell 3, nec se ne ne, 22-32-2e.

TEXAS

ARCHER COUNTY—W. W. C. Young, Archer City, Taylor 2, S 1, S. P. Ry. sur, 50 ft e of No. 1. M. T. McLaughlin et al, Wichita Falls, Netherton 1, s 92, Amer. Trib. center.

BROWN COUNTY—Barney Garrett, Cisco, Butler 1, J. McGloin, 200 ft from s & w lines. Humble, Cisco, Kilgore B12, J. Delgado, 485 ft se of No. 8; Kilgore B19, J. Delgado, 362 ft w of No. 7. Midland Oil Co., Fort Worth, Butler 4, T. Benson, 450 ft from e & 150 ft from s line. G. P. Mitcham, Cisco, Keeler 2, J. Kinney. S. J. Taylor, Fort Worth, Newton 2, No. 636 Honeycutt, 150 ft from e & 40 ft from s line.

BOWIE COUNTY—E. B. Green, Texarkana, Rosenberg 1, L. T. King, 200 ft from w & 1000 ft from s line.

BEXAR COUNTY—Geo. E. Ginter, San Antonio, Wiseman-Bump 1 B9, J. Montez, 150 ft from sw & 300 ft from se line.

CALLAHAN COUNTY—York Pet. Co., Stamford, Kile 2, 2280 TE&L, 450 ft from n & w lines. Moutray Oil Co., Abilene, Hickman 10, S 149, BBB&C, 1324 ft from n & 300 ft from w line. W. B. Flynn, Beaumont, Skelley 15, 150 ft from s & w lines. J. T. Leach, Moran, Gray 1, S 112, Univ. Lands, 150 ft from e & 500 ft from s line. Gibson & Johnson, Abilene, Snyder 2S2, S 139, BBB&C, 450 ft from s & w lines. F. E. Shaheen, Abilene, Radford 1, S 80, Bayland Asy., 150 ft from n and w lines. Manning & Richard, Cisco, Hill 1, S 42, D&D, 800 ft from n & 300 ft from w line. Humble, Cisco, Dyer 1, S 22, E. T. Ry. sur, 2280 ft from n and 1350 ft from w line.

CALDWELL COUNTY—Chas. Hertz, Lockhart, McMahan 50, 1, J. Pinchback, 150 ft from w & 800 ft from s line. Texas Co., Houston, Branyon 2, R. B. Jarmon, 1580 ft from w & 150 ft from s line; Medford 1, D. Cooper, 150 ft from s and 304 ft from e line.

COLEMAN COUNTY—Prairie O. & G. Co., Ranger, Morris 1, S 71, T&NO sur, 660 ft from n and w lines. Archie Shaw, Burkett, Burns 41, blk 1, A. Wickson, 1350 ft from n and 3150 ft from e line. Humphreys Bros., Inc., Brownwood, Henderson 1, blk 24, H. Cocheron, 150 ft from e and 1650 ft from s line.

CROCKETT COUNTY—Humble, Wichita Falls, Powell B 4, S 52, BBB T. C. Ry. sur, 330 ft from n and w lines. Tidal Oil Co., Fort Worth, University 1, S 8, blk 50, Univ. Lands, 330 ft from s and e lines. Gulf, Fort Worth, Thompson A 1, S 74, blk 1, I&GN sur, 200 ft from n and 4661 ft from w line.

CLAY COUNTY—J. W. Rose, Petrolena, Frey 1, blk 83, P. C. S. L., 250 ft from n and 150 ft from w line. Lone Star Gas Co., Dallas, Stine 20, blk 16, P. C. S. L., 500 ft e of center of w line.

CHEROKEE COUNTY—Texas Company, Houston, Skillern 1, E. W. Hockett, 500 ft from w and 1320 ft from n line.

COMANCHE COUNTY—Critten & McClain, Breckenridge, Wyatt 1, S 49, D&D Asy., 150 ft from w and 900 ft from s line.

CARSON COUNTY—Empire G. & F. Co., Pampa, Dauer B 1, S 73, blk 4, I&GN sur, center.

EASTLAND COUNTY—Texas Pacific Coal & Oil Co., Ranger, Fee 3, W. Van Norman, sw corner. C. M. Root, Eastland, Ray 4, S 38, blk 4, H&TC, 1500 ft from w and 1000 ft from s line. Operator's O. & G. Co., Cisco, Adamson 1, W. Van Norman, 350 ft from n and e lines. Mook-Texas Oil Co., Fort Worth, Casey B 3, W. Van Norman, 900 ft from s and 150 ft from w line. Root & Rhodes, Eastland, Henning 1, W. Van Norman, 1666 ft from n and 150 ft from e line. C. M. Root, Eastland, Thorpe 160 3, S 37, blk 4, H&TC sur, 660 ft from n and e lines.

FORT BEND COUNTY—Navarro Oil Co., Houston, Robinson A 5, H. Shropshire, 60 ft from n and 75 ft from e line; Davis 1, S 30, B. Wickson, 50 ft from s and 140 from e line. Gulf, Houston, Trone 8, No. 67, H&TC Ry. sur, 400 ft w of No. 7. Cullen, West & Pillot, Houston, Lee 1, J. Pointevent, 165 ft from w and 65 ft from s line.

GRAY COUNTY—Barker & Wetzell, McLean, Moore 1, S 66, blk 25, H&GN sur, 330 ft from s and w lines. Parton, Holt & Sherwood, Amarillo, Moore 1, S 5, blk 26, H&GN sur, 330 ft from n and w lines.

GLASSCOCK COUNTY—Roxana, South Bend, Boston 1, S 30, blk 34, T&P sur, 1320 ft from s and e lines.

HARRIS COUNTY—R. E. Smith, Houston, Parsons 3, No. 1028, BBB&C sur, 15 ft from n and 100 ft from w line. Woods & Bennett, Humble, Edgar Bros. 10, Jas. Strange, 40 ft e of No. 5.

HARTLEY COUNTY—Amarillo Oil Co., Amarillo, Bivins A 8, S 4, blk 25, EL&R sur, 100 ft e of center of w line.

HOWARD COUNTY—Cosden & Co., Inc., Fort Worth, Roberts A 1A, S 129, blk 29, W&NW sur, 330 ft from s and e lines. Merrick & Bristow, Big Springs, Roberts 1, S 137, blk 29, W&NW sur. California Co., Colo-

rado, Foster 5, S 6, blk 29, T&P sur, 1320 ft n of No. 4.

JEFFERSON COUNTY—J. H. Sutherlin, Port Arthur, Longhorn 1, J. Douthitt, nw corner. Oswald Dome Synd., San Antonio, Oswald 1, M. Pevito, 900 ft from w and 250 ft from n line. Gulf, Houston, Gladys 231, J. A. Veatch, 30 ft n of No. 178. Yount-Lee Oil Co., Beaumont, McFaddin 68, P. Humphreys, 162 ft from e and 1475 ft from n line.

JONES COUNTY—Teas & Wheeler, Colorado, Sayles 1, S 3, blk 20, T&P, center. Cowboy Evans, Abilene, S. W. King 1, blk 3, M. Bueno No. 197, 1000 ft from n and 150 ft from w line.

KING COUNTY—Texas Co., Houston, Johnson 1, S 4, H&GN sur, 4718 ft from n and 815 ft from e line.

LIBERTY COUNTY—Humble O. & R. Co., Houston, Sterling 1, J. McFadden, 100 ft from n and 8500 ft from e line.

LOVING COUNTY—L. E. Lockhart, Pecos, Bowen 1, S 92, blk 1, W&NW sur, 330 ft from n and w lines.

LIMESTONE COUNTY—R. S. Pipkin et al, Mexia, Richardson 10 1, P. Varela, 450 ft from w and 170 ft from s line. Reiter & Lewis et al, Mexia, Ward 81 A1, P. Varela, 150 ft from ne and se lines.

LIVE OAK COUNTY—W. J. Walton et al, Three Rivers, Wedding 1, blk 3, se corner.

MONTAGUE COUNTY—Arco Oil Co., Wichita Falls, Loy 6, W. Donoho, 750 ft from w and 150 ft from n line.

PECOS COUNTY—Roxana, South Bend, Smith B 1, S 24, blk 194, GC&SF sur, 990 ft from n and 1025 ft from w line.

PANOLA COUNTY—Smith & Worner, Shreveport, Flanagan 1, T. Lawless, 400 ft from s and w lines. Texas Co., Shreveport, Bramble 4, J. Womack, 720 ft from e and 530 ft from s line.

PARKER COUNTY—R. E. Lynch, Dallas, McCracken 1, 2549, TE&L sur.

POLK COUNTY—W. H. Freeman, Liggett, Freeman 1, De la Jarza, 1089 ft from w and 1060 ft from s line.

REAGAN COUNTY—Roxana, South Bend, Campbell 1, S 30, blk 11, Univ. Lands, 330 ft from n and w lines.

SHACKLEFORD COUNTY—Tannehill, Kiser & Flemin, Albany, Matthews 3, S 34, E. T. Ry. sur, 450 ft from e and 750 ft from s line. Sentinel Pet. Corp., Fort Worth, Hadley 1, S 63, blk 11, L. A. L. sur, 150 ft from s and e lines. C. E. Stalker, Cisco, Diller 1, S 5, E. T. Ry. sur, 400 ft from s and 150 ft from e line. T. G. Shaw, Fort Worth, Rice 2, S 43, Bayland Asy., 750 ft from nw and 450 ft from ne line. Geo. Callihan, Albany, Nail 3, S 151, E. T. Ry. sur, 750 ft from e and 150 ft from s line. W. J. Cluney, Breckenridge, Whitney 7, 512, TE&L sur, 150 ft from n and w lines. Loggie & Arendt Oil Co., Albany, Blach 21, 507, TE&L sur, 200 ft nw of No. 11; 22, 900 ft from ne and 600 ft from se line. H. W. McGee, Eastland, Elliott 2, S 9, L. A. L. sur, 450 ft from n and 150 ft from w line.

SAN PATRICIO COUNTY—Saxet Co., Corpus Christi, White Point O. & G. Co. 200, 15, F. S. Rachal, 300 ft from n and 600 ft from w line.

STERLING COUNTY—Hucony Gas Co., Sweetwater, Ellwood 1, S 14, blk 2, H&TC sur, 250 ft n of center of s line.

SUTTON COUNTY—Phillips Pet. Co., Bartlesville, Okla., Holman 1, S 25, CCSD&RGNG sur, 330 ft from s and e lines.

STEPHENS COUNTY—Griffith & Thurman, Breckenridge, Crudgington 2, 1268, TE&L, 150 ft w of center of e line.

TOM GREEN COUNTY—Concho Pacific Oil Co., Pasadena, Calif., McKee 1, blk 15, J. Eldridge, 311 ft from e and 1039 ft from s line. H. H. Tucker, San Angelo, Green 1, S 164, S. P. Ry. sur.

WICHITA COUNTY—Texas Co., Wichita Falls, Mangold 1, P. Castleman, 150 ft from s and e lines. Bonchil Co., Wichita Falls, Perkins 1, P. Corrigan, 150 ft from s and e lines. C. C. & E. G. Oil Co., Iowa Park, Watkins 1, blk 46, W. V. F. L. sur, 100 ft from s and w lines. Empire G. & F. Co., Wichita Falls, Pierce-Fordyce 1, S 9, HT&fl sur, 150 ft e of center of w line. Swanner & Williams, Wichita Falls, Williams-Parker 2, blk-5, J. McCool, 150 ft from s and w lines. Kemrow Co., Electra, Chilson 2, blk 1, M.

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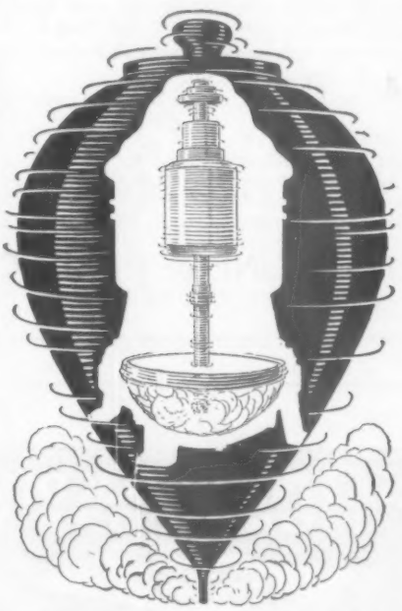

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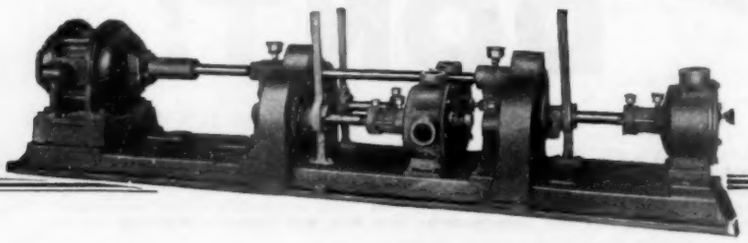

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Ramsey, 150 ft from n and e lines. Vergate Oil Co., Tulsa, Watkins 5, H. B. Balch, 300 ft n of No. 4. Coppock & Coleman, Iowa Park, Kemp & Kempner 9, blk 82, HT&B sur, 300 ft n of No. 5; 10, 300 ft w of No. 9.

WILBARGER COUNTY—Manhattan Oil Co., Wichita Falls, Waggoner 1, S 30, blk 4, H&TC sur, 660 ft from n and 205 ft from e line. Waggoner Ref. Co., Electra, Waggoner 1, S 24, blk 4, H&TC sur, 250 ft from n and 552 ft from w line. Consolidated Oil Co., Wichita Falls, Waggoner 1, S 5, blk 5, H&TC sur, 150 ft from s and 214 ft from e line. Phillips Pet. Co., Bartlesville, Okla., Waggoner 19, S 42, blk 4, H&TC sur, 2941 ft from e and 220 ft from s line. Texas Co., Wichita Falls, Waggoner G 1, S 3, blk 17, H&TC sur, 739 ft from n and 569 ft from w line. Fain-McGaha Oil Corp., Wichita Falls, Waggoner L 3, S 31, blk 4, H&TC sur, 300 ft e of No. 1; 4, 300 ft s of No. 3; Waggoner T 1, S 50, blk 4, H&TC sur, 450 ft from e and 300 ft from s line; Waggoner M 8, S 24, 300 ft e of No. 7.

WINKLER COUNTY—Skelly Oil Co., Tulsa, Okla., T. G. Hendrick 2, S 40, blk 26, 440 ft from n and 330 ft from e line; 3, 330 ft w of center of e line; 4, 880 ft s of No. 3; 5, 330 ft from w and 440 ft from s line. Landreth Prod. Corp., Odessa, I. Hendrick, 1 E, S 39, blk 26, 330 ft from e and 440 ft from s line; I. Hendrick 2 D, S 40, 330 ft from e and 440 ft from s line. Prairie O. & G. Co., Ranger, T. G. Hendrick 2, S 40, blk 26, 330 ft from e and 440 ft from s line.

WHARTON COUNTY—Geo. Hyde, Houston, Woytek 10, S. F. Austin, 270 ft from ne and 225 ft from se line.

WEBB COUNTY—O. W. Killam, Laredo, Bruni 9, S 64, Arriba, 300 ft s of No. 8. Cole Pet. Co., Laredo, Benavides 60, S 412, blk 6, 160 ft from n and 460 ft from e line.

WASHINGTON COUNTY—Trinity Drillers, Inc., San Antonio, Gibbons Est. 1, Gibbons, 150 ft from n and e lines.

YOUNG COUNTY—Nash & Windfohr Oil Corp., Graham, Williams 2, M. L. Lassiter, 150 ft se of No. 1. D. L. Wolf, Olney, Jeffery 1, S 58, TE&L sur, 150 ft from n and e lines. J. L. McMeans, Fort Worth, Deats 1, 300, TE&L sur, 150 ft from s and e lines. Texas Co., Wichita Falls, Leberman 1, 221, TE&L sur, 874 ft from e and 2018 ft from s line. Bullington, Lee, Pendleton & Bullington, Wichita Falls, Boone 3, S 1, BBB&C sur, 300 ft s of No. 2. P. F. Gwynn, Wichita Falls, Kunkel B 1, BBB&C sur, 150 ft from s and e lines. C. W. Boller, Wichita Falls, Minkley 1, 1990, TE&L sur, 150 ft from s and e lines. Kleiner, West & H-Y Oil Co., Fort Worth, Langston 9, 1490, TE&L sur, 1350 ft from n and 150 ft from e line; 10, 750 ft from e and 150 ft from s line.

LOUISIANA

ACADIA PARISH—Yount-Lee Oil Co., Beaumont, Texas, Houssiere-Latrielle 4, 47-9s-2w, 165 ft n and 4385 ft e of sw cor

BOSSIER PARISH—Henry Norman, Tr., Philadelphia, Pa., McDade 1, 36-17n-12w, 3960 ft w and 660 ft n of se c. Southern O. & G. Co., Philadelphia, Pa., Curtis 3, 2-16n-12w, 1320 ft w and 760 ft s of ne c.

CADDO PARISH—Shreveport Oil Corp. and Ross Pet. Corp., Shreveport, Muslow 3, 32-21n-15w, 483 ft w and 619 ft n of se c se nw.

CALCASIEU PARISH—Gulf, Houston, Texas, Industrial Lbr. Co. 11, 19-9s-12w, 100 ft s and 700 ft e of nw c e½ se. Rex Pet. Corp., Orange, Texas, Hunter 9, 21-9s-11w, 75 ft e and 35 ft n of sw c e½ se sw.

CAMERON PARISH—Calcasieu Oil Co., Inc., Magnolia Pet. Co., and Union Sulphur Co., Houston, Texas, Watkins 4, 24-12s-10w, 3513 ft e and 1108 ft s of nw c; Watkins 5, 24-12s-10w, 1050 ft s and 3310 ft e of nw c.

FRANKLIN PARISH—La. Pet. Corp., Shreveport, Daily 1, 6-11n-7e, 200 ft s and 200 ft e of nw c sw.

RICHLAND PARISH—S. D. Hunter, Monroe, McCoy 1-B, 16-16n-6e, 660 ft e and 825 ft n of sw c nw.

ST. MARTIN PARISH—Yount-Lee Oil Co., Beaumont, Texas, Louisiana Pet. Co. 1, 86-9s-5e, 770 ft n and 740 ft w of se c.

WEBSTER PARISH—Magnolia, Shreveport, Munn-Bailey 1, 30-23n-9w, 660 ft n and 660 ft e w of se c ne se.

When foresighted buyers specify *long life* as one qualification of oil field equipment, so often the order is filled with equipment made of Sheffield Copper Steel Sheets.

Specify Sheffield
Copper Steel Sheets

SHEFFIELD STEEL CORPORATION
KANSAS CITY, MO.

New Billet Reinforcing Bars . . Rail Steel Reinforcing Bars . . Blue Annealed Sheets . . Merchant Steel Bars
Merchant Iron Bars . . Bolt and Nut Products . . Sucker Rods . . Pull Rods . . Track Spikes . . Forgings . . Rivets

POINTERS on Steel Derricks

Fireproof—

Fire has always been a great hazard in the oil country. Millions of dollars worth of equipment has been destroyed by this great enemy of the driller. It would only seem logical therefore to use as much all-steel equipment as possible. O'Brien Steel Derricks are as fire-proof as any derrick can be. This one characteristic alone should be reason enough to use O'Brien Derricks. The O'Brien shown here stood unharmed after fire had destroyed everything else at this well.

Why Experiment? O'Brien Derricks will drill your wells and pull your casing.

O'BRIEN STEEL CONSTRUCTION COMPANY, INC.
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Western Representatives: RIG EQUIPMENT COMPANY, 1524 South St. Louis St., Tulsa, Okla.

"The Strongest Geared Power for Its Weight in the World"

ALL STEEL HAND HOIST
TRADE MARK
SEATTLE, U.S.A.

Weight 110 lbs.

Capacity FIVE TON STRAIGHT LINE

Size 16x17x13" High

Two Speeds 4 to 1 24 to 1

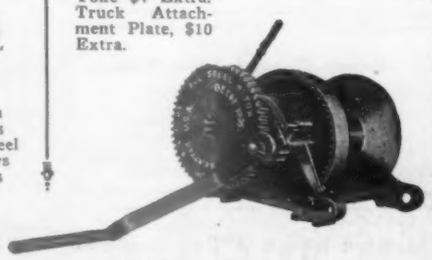
POSITIVE INTERNAL BRAKE

Construction Eight Pieces Electrical Steel Without Keys or Setscrews

A useful performer every day for hoisting, lowering or pulling jobs, but a particular friend of the oil operator in an emergency. Here its unusual power and great convenience come into play.

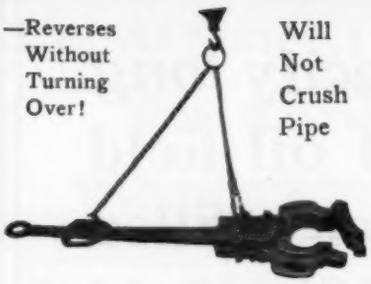
Price $80

Steel Tail Hold Yoke $4 Extra. Truck Attachment Plate, $10 Extra.



Sold by
The National Supply Companies

—Reverses Without Turning Over!



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There's No Time Wasted on Rigs Equipped with

STANCLIFF Break-Out Tongs

ONE HANDLE holds various jaws to fit any size pipe. Changing ONE PIN reverses the action. Automatic latch quickly releases without sledging. Removable jaw-keys stand all the wear.

Simple — Durable — Strong

Write for Prices

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West Texas Oil and Gas Leases

⅞ *Mineral Deeds*

ROYALTIES

15 Years in Texas
Reference: Mercantile Agencies

Petroleum Building
FORT WORTH, TEXAS

PHILLIP MAVERICK
PETROLEUM GEOLOGIST
Rust Bldg.
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PATENTS
Patents Obtained, Trade Marks, Patent Causes
JESSE R. STONE
Formerly Assistant Examiner
United States Patent Office
Andrews, Streetman, Logue & Mobley
12th Floor Union N. Bk., Houston, Tex

Maurice Hirsch & Ben J. Brown
ATTORNEYS AT LAW
601-2-3 Goggan Bldg.
HOUSTON, TEXAS
Specializing in Oil Law and Land Law

LeBus Products Handled Through Supply Houses

Electra, Texas.—The LeBus Rotary Tool Works with general offices and factory here announce discontinuing of all direct selling to the trade and will sell their oil field products hereafter through supply companies. Direct factory representatives are being established in the more important centers of field activity and these men will work in cooperation with oil producers and the supply houses.

LeBus factory representatives are P. F. (Doc) Murray, California area with headquarters at Montebello, California; Paul Reid, Gulf Coast area, with headquarters at Houston; W. L. McDowell, Winkler County area, with headquarters at Pyote, Texas; T. E. (Jack) Hale, North Texas area, with headquarters at Wichita Falls, Texas, and the Acme Well and Supply Company of New York, export representatives.

These representatives are experienced in servicing LeBus products and their presence in the field will not only afford a closer personal service to the company's customers but will enable the company to extend its usefulness over an even wider area than heretofore.

LeBus products include the LeBus automatic cathead, circulating and releasing overshots, rotary tongs, brakedown post, rotary casing cutters, outside drill pipe cutters and other production specialties.

Open New Office

On March 28 The Linde Air Products Company opened a new district sales office at 48 West McLemore Avenue in Memphis, Tennessee. Other Linde district offices are maintained in 25 leading industrial centers. Users of Linde Oxygen, Oxweld welding and cutting equipment and supplies, Prest-O-Lite acetylene and Union Carbide in the district which consists of Western Tennessee, Northern Mississippi and Eastern Arkansas will find this office prepared to handle their needs. H. N. Smith will be district manager in charge.

HEYDRICK'S NEW MAPS
WEST TEXAS

County Maps
Combination Maps

Descriptions and prices on application

HEYDRICK MAPPING COMPANY
Wichita Falls, Texas.

ADDRESS WANTED

Wanted, the address of Roy Watkins, driller. Worked at Desdemona and Mirando City, Texas, and later at Webb City, Oklahoma. About 35 or 40 years old

Box 810, c/o The OIL WEEKLY

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ADVANTAGE point from which all that this great River City offers may be fully and conveniently enjoyed. Accessible to every part—the center of the night life—the favorite meeting place.

Its warm hearted hospitality, unstinted service and luxurious accomodations will make you want to return when you come again to St. Louis.

Convenient Accessible Rates $2.50 up

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The Hotel Coronado
LINDELL BLVD. AT SPRING AVE.
700 ROOMS 700 BATHS
St. Louis' Largest Hotel

The way to save money on fence is to buy on the basis of per-year cost. Cyclone Fence representatives are equipped with vitally important facts relating to quality and long life in fence construction. Prompt service on estimates. Write, phone or wire nearest offices.

TEXAS CYCLONE FENCE COMPANY
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The Mark of Dependable Property Protection

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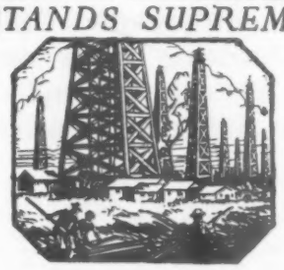
ASCO STEEL
STANDS SUPREME



Every step in the production of Asco Steel is watched closely. From the selection of the raw materials to the finished product, the first thought always is to produce a steel that will give the best results to the makers of Oil Well Tools. Can we help you to produce better tools?

DISTRICT OFFICES:
503 Phil Tower Bldg., Tulsa, Okla.
541 McCormick Bldg., Chicago, Ill.

THE ANDREWS STEEL CO
NEWPORT KENTUCKY

"UNITED"
OIL
REFINERY
EQUIPMENT
THE
STANDARD FOR MORE
THAN 25 YEARS

"UNITED" has served the oil industry for more than 25 years. During that time "United" Equipment has proved its excellence in practically every phase and every condition of refining equipment manufacture. And "United" Service has made warm friends in the refining field by the manner in which it has conscientiously met every demand made of it. When you need refinery equipment, you will find that "United" can supply it more rapidly, more efficiently and more economically.

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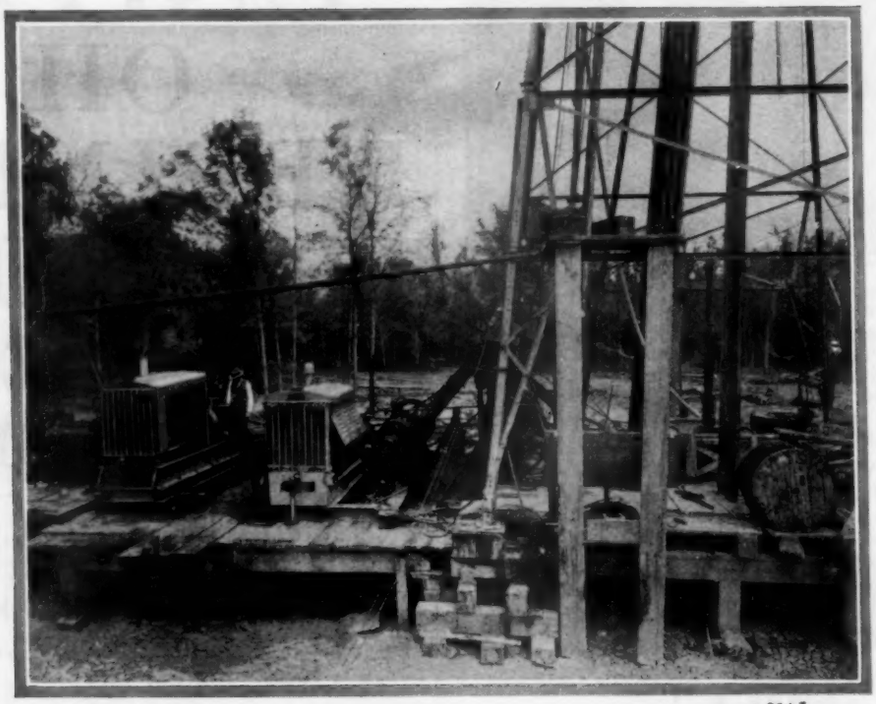


p-824-L

Two 125-Horsepower "Gaspowered" Units on No. 1 Sugar Land Discovery Well

Waukesha and a Spanish Queen

Queen Isabella, in 1492, furnished the power behind the discovery of America. Waukesha, in 1928, furnished the power behind the discovery of oil in the Dewalt area in Texas. This latest discovery is only one of many pioneering enterprises powered by Waukesha Ricardo Head Engines. The location of the well in a heavily wooded river bottom made portability a prime factor in the selection of the power equipment. Only Waukesha natural gas-burning units can meet the severe demands of "wild catting"—Portability, dependability and reserve power.

Waukesha portable power plants are built in sizes ranging from 25 to 125 horsepower. Equipped with "Gaspower," these economical Ricardo Head Engines have won acceptance as the standard of performance for all oil field operations. Write for bulletins 629 and 662.

P-838-L

OIL INDUSTRY EQUIPMENT DIVISION

WAUKESHA MOTOR COMPANY

Waukesha Wisconsin

New York	Tulsa	Houston	San Francisco
8 W. 40th St.	C. F. Camp Co.	Portable Rig Co.	C. A. Watts

Exclusive Builders of Heavy Duty Gasoline Engines for Over Twenty Years

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Mack Drilling Outfit

MACK TRUCKS, INC.

Mack Trucks, Inc., Cunard Building, 25 Broadway, New York, with branches in all the leading cities in this country, announces the Mack Model AP 150 horse power engine and drilling clutch for cable tool drilling. The outfit has been tried out by a number of oil companies operating in the Mid-Continent and Rocky Mountain areas and has shown up exceptionally well.

Specifications for the assembly are as follows:

Engine: Mack Model AP, six cylinder with five-inch bore and six inch stroke; 150 brake horsepower; removable head; counterbalanced crankshaft; case hardened surfaces; main bearings 3 7/16-inches in diameter; dual ignition, battery and magneto; fuel tank capacity 60 gallons.

Radiator: Mack finned, tube radiator; air circulation by blower of the squirrel cage type, mounted on the flywheel, capacity of radiator, 15 gallons; capacity of auxiliary water tank, 136 gallons; thermostatic control of water system.

Engine clutch: Mack single dry plate.

Transmission: Mack selective sliding gear, four speeds. This transmission affords three reductions below direct drive with which to multiply the power for pulling casing, etc. The lowest reduction multiplies 5.20 times.

Equipment: Electric starter and generator with two-battery, 12 volt control. A tachometer indicates engine speed. Other equipment includes an air cleaner, motometer, gasoline strainer and oil filter.

Weight of the power unit is 6000 pounds.

Drilling clutch: Superior type C No. 12; diameter 24 inches, face 18 inches; clutch shaft is mounted on Timken roller bearings; pulley 68 inches diameter, 13-inch face; steel castings throughout, with drop-forged gears; a special brake for hitching over; driving belt, 12 inches, five ply endless; weight of the clutch unit is 5300 pounds.

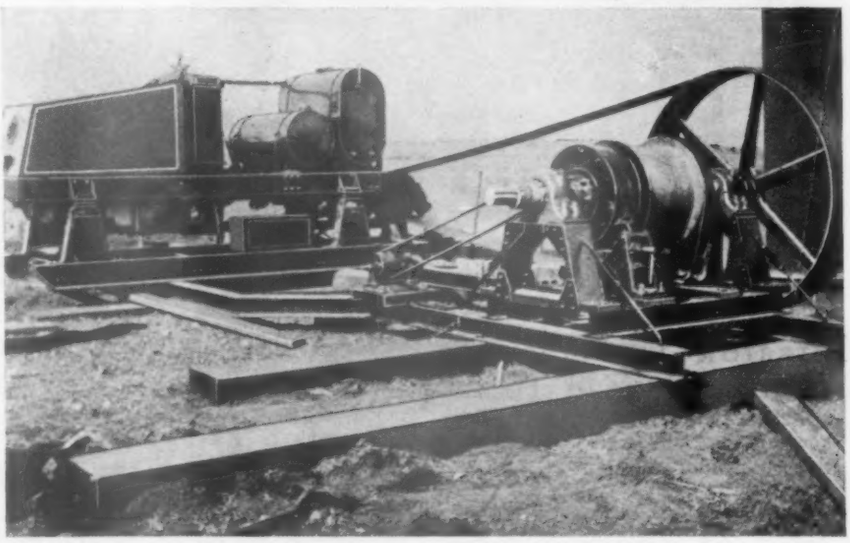
Rotary pump: a one and one-fourth inch rotary pump is furnished mounted on the frame driven by a two-inch belt from the clutch shaft.

Dimensions: Complete assembly, power plant and drilling clutch, length 23 feet, six inches; width 14 feet, six inches; Height, seven feet; center to center power unit pulley to drilling clutch, 15 feet.

The engine develops 150 horsepower with a speed range of from 200 to 2000 revolutions per minute.

Fuel consumption of the engine, as determined by tests drilled in Oklahoma, is about 65 gallons of gasoline per 24 hours running at full load.

Additional information can be had from headquarters, or from the Mack-International Motor Truck Corporation, 1900 South Ervay Street, Dallas, Texas.



Mack Cable Tool Drilling Outfit

A New Type Portable Mowing Machine

THE RAWLS MANUFACTURING COMPANY

The Rawls Manufacturing Company, Streator, Illinois, is marketing the Motor-Mower, a new type of mowing machine which is adaptable for use around tank farms and oil field properties where it is necessary to keep down weeds.

The outfit is propelled by a direct-gear traction drive to the traction wheel, with the cutter bar connected direct to a power take-off by means of pitman rod and balance crank pin.

The cutter bar is of the heavy-duty type.

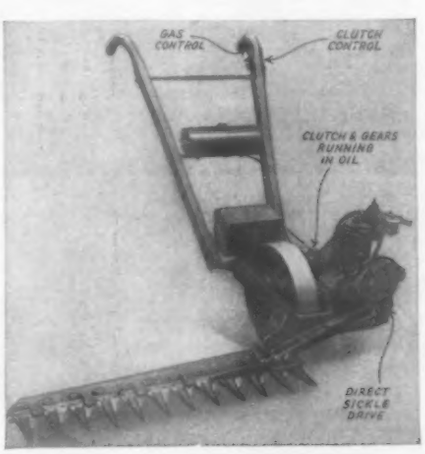
The frame is a one-piece alloy iron casting.

Rough ground is said to be no obstacle to the mower, as it cuts on hillsides as well as on level ground.

The operator starts the engine, throws in the clutch and the mower goes into action. It can be easily guided around obstacles and can be tilted where necessary. It also pivots on its one wheel for turning sharp corners.

The machine is equipped with a four-cycle gasoline engine which furnishes power to propel it. Proper balance is maintained when the machine is cutting.

Further information will be supplied by request to the company.



Motor-Mower Machine

Portable Compressor

INGERSOLL-RAND COMPANY

Ingersoll-Rand Company, 11 Broadway, New York, has added a seventh size to its line of portable air compressors.

This new size, four and three-fourths inch bore by four-inch stroke, has a piston displacement of 82 cubic feet per minute.

The machine is equipped with a four-cylinder, tractor-type Waukesha motor. It is available on broad-faced steel wheels, on steel wheels with rubber tires, on trailer mountings, or Ford or Chevrolet truck, or without running gear for mounting on skids.

Further details may be secured by correspondence with the company.

The Ratigan "Missionary"

Missionary Truck to Feature Ratigan Tools

Tulsa, Okla.—Mid-Continent factory representatives of J. P. Ratigan, Los Angeles manufacturer of oil well pumping equipment, and their Mid-Continent dealer, Frick-Reid Supply Company are arranging demonstrations in centers to be visited by the new Ratigan display truck "The Missionary." The display has been covering the California fields during the last few weeks, and left on a four months' tour of the Mid-Continent about May 1. The itinerary as laid out takes the display first to the Wyoming fields, then down through Ft. Collins and Denver, Colorado, and through to Tulsa and the Oklahoma and Texas fields.

On the truck are mounted samples of every Ratigan product in full size. Products exhibited include the new Ratigan chain type horsehead, universal oil bath beam hanger with rotor attached, mounted on a short walking beam built to standard for demonstration. The appliances are shown as they appear in actual service. On the short sampson post is mounted the Ratigan sampson post rocker as used. Other products displayed include a new sucker rod hook, a new tubing hook, and a new spring swivel tubing link, as well as new "C" links, clamps, etc., and the complete older line of Ratigan equipment.

It is planned to hold demonstrations at various strategic points, to which staffs of the oil companies operating in these districts will be invited. The tour of "The Missionary" through the California fields was enthusiastically received.

Book Review

"Oil, Its Conservation and Waste," by James H. Westcott, is a new book on petroleum written especially for the layman. The style of the book is such that it will appeal to the man not familiar with petroleum or the methods of recovering it. Inasmuch as there have been few works of this type, the book should fill a particular need in this country.

As a volume to give a birds-eye view of the industry in its three phases, the book has considerable merit. While not as comprehensive and detailed as more technical treatises, it is complete as far as it goes and gives all the fundamental information necessary for an understanding of oil.

Much data in the form of figures supplements the subject matter. These figures cover production, refining, etc., and constitute a good source for general information. There are 62 tables covering a wide range of topics related to the industry.

Copies of the book can be secured from the Gulf Publishing Company, P. O. Box 1307, Houston, Texas. Price $3.00.

Catalog Announcement

"Kaysteel" Seamless Slipjoint Steel Pipe is described in detail in a booklet just issued by Otto Kafka, 706 Esperson Building, Houston.

The booklet gives details of manufacture of "Kaysteel" Seamless pipe and calls attention to its advantages. Specifications are listed and explained.

In addition to its other features, the protective coating used on "Kaysteel" is a new development in pipe. The tubes are preheated to a suitable temperature and later submerged in a bath of bituminous solution. The pipes are then mechanically lifted out of the bath and elevated to enable the excess solution to drain from the tube shaft. The tubes are then rolled down a skid to the wrapping machine, where they are wrapped with jute. The wrapping machine paints the outside of the pipe and wraps it either singly or doubly.

After wrapping is completed, the pipe is washed with lime and coated with cement, insuring the pipe against sticking when it is handled.

Copies of the booklet may be had upon application to the address given above.

The Mid-Continent sales office of the Lufkin Foundry and Machine Company in Tulsa has been removed from the eighth floor of the Mid-Continent building to 503 Philtower building. W. W. Trout is in charge of the Tulsa office of the company.

Republic Buys Associated In California

Los Angeles.—The Republic Supply Company of California, recently announced the purchase of the entire capital stock of the Associated Supply Company from the Youngstown Sheet and Tube Company, for a consideration of about $2,000,000.

According to J. A. Crawford, president of the Republic Supply Company, his company by reason of the purchase, becomes exclusive distributor in California for Youngstown oil country tubular goods. The Youngstown Sheet and Tube Company makes a complete line of seamless and welded casing, tubing and drill pipe. Large stocks of these products will be maintained in California by Republic.

The company distributes such equipment as: Ideal drilling tools, Axelson pumping equipment, Hughes bits and tool joints, Reading "Genuine Wrought Iron" pipe, B. & B. wire lines, Gardner pumps, Westcott and Fairbanks valves, Reed bits, Wilson tongs and elevators, Guiberson products, Howe chains, etc.

Stores are maintained at Santa Fe Springs, Long Beach, Huntington Beach, Richfield, Torrance, Taft, Bakersfield and Ventura. An addition is now being built to the executive quarters in Los Angeles.

Officers of The Republic Supply Company of California include P. M. Pike, chairman of the board; J. A. Crawford, president; J. M. Cummings, vice-president; H. H. Glen, secretary; and J. W. Schmid, sales manager.

Wickwire Spencer Steel Company announces that John J. Lovell has been appointed district manager, succeeding V. E. Baum, for the New York territory. Mr. Lovell has been connected with International Supply Company for the past few years.

George H. Creveling, treasurer of the company, and E. L. Stevens, sales manager, have recently completed a tour of the Mid-Continent fields in the interest of wire rope sales.

The company also announces the removal of its Tulsa office from 222 East Brady Street to Room 1310, Philtower Building.

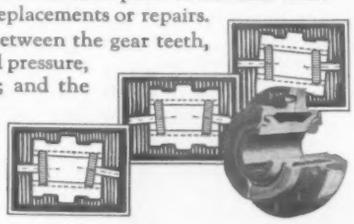
The Hydraulic Pressed Steel Company, Cleveland, Ohio, has been purchased by the Truscon Steel Company, Youngstown, Ohio, and will be operated as their pressed steel division. The entire plant is being completely modernized to insure the most efficient production. With this increase in facilities the Truscon Steel Company will have one of the largest capacities for furnishing pressed and deep drawn steel of every description. The improvements are proceeding rapidly, and full productive capacity will be available shortly. Inquiries may be addressed either to the Truscon Steel Company at Youngstown, Ohio, or to the Hydraulic Pressed Steel Company, Cleveland, Ohio.

FAST'S COUPLING Stops Replacements

THE REASON is the ABSENCE of flexible materials in Fast's flexible coupling design. Instead, two spur gears, one on each shaft end, are completely and continuously meshed in oil with the internal gears of a floating sleeve. The shafts and sleeve turn noiselessly as one unit, allowing free angular and lateral movement.

So there is nothing to be continually bent or compressed. Nothing to fatigue and crystallize. No flexible bushings. No pins. No springs. No discs or grids or any other flexible parts to fail and cause shut-downs for replacements or repairs.

Instead, oil between the gear teeth, under centrifugal pressure, carries the load; and the coupling will last as long as the connected machines.



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200 Scott Street - BALTIMORE, MD.

Write today for free BOOK

TYLER BOILER TUBES

Resist corrosion—

Whether it is charcoal iron tubes for bad water conditions or lap-welded steel tubes for good water conditions—Tyler Boiler Tubes will give *lasting* satisfaction.

All tubes are made to A.S.M.E. Code Requirements.

Request full details

THE TYLER TUBE & PIPE CO.
WASHINGTON, PA.

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Harrisburg Pipe and Pipe Bending Co., Houston, Texas
Harrisburg Supply Company, Tulsa, Oklahoma.
Johnson-Peter Company, Brookiyn, N. Y.; Pittsburgh, Pa.
A. M. Castle & Company, Chicago; Seattle, Washington; San Francisco, Calif.; Los Angeles, Calif.
The Bourne-Fuller Company, Cleveland, Ohio.
Lukens Steel Company, New Orleans, La.

The Wire Rope that Runs

UNIFORM

The value of wire rope to the user is not in the price per foot, but is the number of days' service, tons hoisted or total million feet of logs transported. A trial of Wickwire rope will prove its value in service.

The Wickwire organization is at all times equipped with information, and is willing to extend to the trade the benefit of their knowledge of wire rope. This is part of Wickwire Service and is offered without obligation.

We will be glad to send you our free catalog. It is an engineering handbook on wire rope.

WICKWIRE SPENCER STEEL CO.
39 E. 42nd St. New York, N. Y.

Approved for Field and Refinery Service

Stanley

Solid Woven Cotton Belting

Oil and Heat

Oil and extreme heat or cold, do not deteriorate Stanley or alter its working efficiency even after years of exposure.

Made in accordance with A. P. I. Specifications. Write, wire, phone.

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42A Southwark St., S. E. 1, London, England

WAGNER SUPPLY COMPANY OF TEXAS
Beat Berger Breckenridge Cross Plains Odessa
H. E. Unsell, 119 North A. Street, Arkansas City, Kansas

W. R. Tucker
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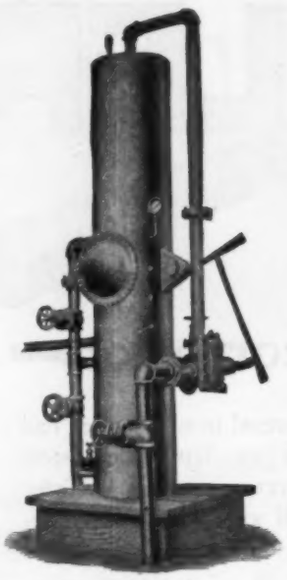

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SQUEAKS FROM THE BULL WHEEL

One Sunday two lovers went to church. When the collection was being taken up the young man explored his pockets and finding nothing, whispered to his sweetheart: "I haven't a cent—I changed my pants."

Meanwhile the young girl had been searching her bag and finding nothing, blushed a rosy red and said: "I'm in the same predicament."

Tramp: Mum, I'm desperate. I haven't eaten for three days."

Lady (who has been on a diet): Nonsense! I felt that way myself at first.

"And after we had been riding awhile, she suddenly got off her horse, bid me a curt good-bye and walked back."

"Sore-head, eh?"

"No, on the contrary."

It was a gentle lawyer man
Who deftly smiled as he began
Her dear dead husband's will to scan.
In thinking of his coming fee,
He said to her quite pleasantly:
"You have a splendid legacy."
Next morning as he lay in bed
With plasters on his broken head,
He wondered what the deuce he'd said.

"Yes," said the oculist, "he had a curious affliction; everything he looked at he saw double."

"Poor fellow. I suppose he found it hard to get a job?"

"Not at all. The gas company snapped him up, and now he's reading meters."

Two backwoodsmen in Maine knocked at the door of a house at the edge of the forest. "Hello, Ed!" said one of them to the farmer who came to the door. "Say," we came across the dead body of a man over there in the hollow an' we kinda thought 'twas you."

"That so? What'd he look like?" asked the farmer.

"Well, he was about your build—"

"Have on a gray flannel shirt?"

"Yep."

"Boots?"

'Yep."

"Was they knee boots or hip boots?"

"Let's see. Which was they, Charley, knee boots or hip boots? Oh, yes, they was hip boots."

"Nope," said the farmer. "It wasn't me."

Irate Father: "I can see right through that chorus girl's intrigue, young man."

Lovesick Son: "I know, dad, but they all dress that way nowadays."

"Is she very pretty?"

"Pretty! Say, when she gets on a car the advertising is a total loss!"

In the good old days, a man could go out and get rousingly drunk, and in the morning when he woke up with a splitting headache, he would put his hand to his forehead and say, "Gosh, I wish I were dead." Nowadays, a man goes out and gets rousingly drunk, and in the morning when he wakes up with a splitting headache, he is dead! —Vassar Vagabond.

Big Business Man—"Can't you read? The sign on that door means Private."

Book Agent—"I know—and I'm glad it's there. If there's anything I hate, it's being interrupted when I'm talking to a prospect."

"I hear that the trust has boosted the price of liquor."

"Quite so, we consumers have a hard time keeping it down."—Carnegie Puppet.

Lightning Bug—"So you think my candle power is a bit below normal, eh?"

"Yes. What sort of shaving cream do you use? You dont' seem to have that fine healthy glow."

He groaned and turned pale as he picked up the ticker tape. "Ruined?" asked a friend solicitously.

"Yes," he sobbed. "I've just remembered that I was to get some ribbon for my wife this noon."

"He drove straight to his goal," fervently spoke the orator. "He looked neither to the right nor to the left, but pressed forward, moved by a definite purpose. Neither friend nor foe could delay him nor turn him from his course. All who crossed his path did so at their own peril. What would you call such a man?" He paused for effect.

"A truck driver," came a knowing voice from the rear.

"Mr. Smithson in conference?"

"Yeh, the old boy's gone into a huddle."

"How does the land lie out this way?"

"It ain't the land that lies; its the real estate agents."

"That girl is wearing the last word in bathing suits."

"Well, if the police ever catch her, it will be a sentence."

The first day of school the primary teacher was questioning the little pupils as to their knowledge so as to properly classify them.

"Johnny, do you know your A B C's?"

Six-year-old Johnny: "Hell, no I've only been here half an hour."

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THE CONTINENTAL OIL COMPANY, Florence, Colorado, owns these Butler READY-MADE Steel Buildings. Their adaptability to the oil industry makes them popular. Besides the Continental, the Signal Oil Company, the Marland Refining Company and the Standard Oil Company of Indiana and the White Eagle Oil and Refining Company and many others use Butler Steel Buildings.

Under working conditions, in the field and elsewhere, Butler READY-MADE Steel Buildings are desirable. They are used as power houses, engine houses, belt houses, warehouses, bunk houses, gasoline plants, etc.

The steel sheets used in Butler READY-MADE Buildings are 24-gage, galvanized with deeply paneled corrugations. All wall and roof sheets are bolted together and to a steel frame with galvanized bolts.

Prices quoted f. o. b. plant or erected.

An illustrated catalog, showing how these buildings are being used in the oil field, will be sent on request.

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The above trade mark was adopted by the Hughes Tool Company nearly twenty years ago, and has been continuously used on Hughes Products since that time. Hughes Tools, today, are used throughout the rotary fields of the world and have played an important part in broadening the scope and use of the rotary method of drilling.

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